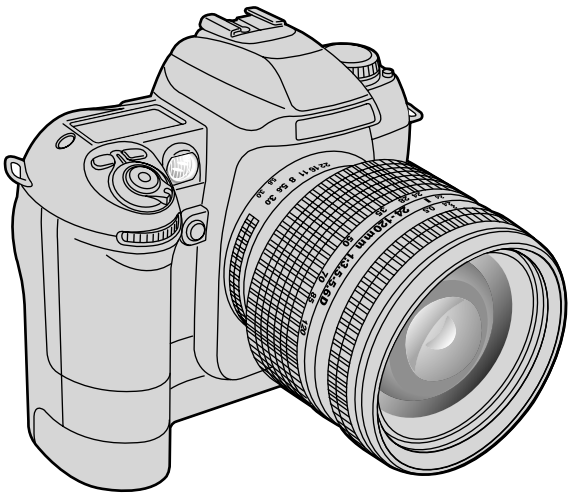
FUJIFILM

DIGITAL CAMERA



FinePix S2 Pro

SERVICE MANUAL

U/E-Model

⚠ WARNING

- THE COMPORNENTS IDENTIFIED BY THE MARK " ⚠ " ON THE SCHEMATHIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR SAFETY.
  PLEASE REPLACE ONLY BY THE COMPORNENTS SPECIFIED ON THE SCHMATHIC DIAGRAMAND IN THE PARTS LIST.
- IF YOU USE WITH PART NUMBER UN-SPECIFIED, IT MAY RESULT IN A FIRE AND AN ELECTORICAL SHOCK.

FUJI PHOTO FILM CO.,LTD.

Ref.No.:ZM00438-105

Printed in Japan 2002.06(T.S.)

SAFETY CHECK-OUT

After correcting the original problem, perform the following safety check before returning the product to the customer.

1. Check the area of your repair for unsoldered or poorly sol dered connections. Check the entire board sur face for solder splasher and bridges.

2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.

3. Look for unauthorized replacement parts, particu larly tran sistors, that were installed during a previ ous repair. Point them out to the customer and rec ommend their replacement.

4. Look for parts which, though functioning, show obvi ous signs of deterioration. Point them out to the cus tomer and recommend their replacement.

5. Check the B + voltage to see it is at the values specified.

6. Make leakage - current measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

7.

RISK OF FIRE-REPLACE FUSE AS MARKED

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 2.5 AMPERES 125V FUSE.

ATTENTION: AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME, TYPE 2.5 AMPERES, 125 VOLTS.

8.

WARNING!
HIGH VOLTAGE

WARNING:
TO REDUCE THE ELECTRIC SHOCK, BE CAREFUL TO TOUCH THE PARTS.

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1. Specifications

1-1. Product Specifications

System

Type of camera	Interchangeable-lens SLR-type digital camera
No. of effective pixels	6.17 million
CCD sensor	Large-format (23.0 × 15.5 mm) Super CCD with primary color filters (total pixels: 6.49 million)
No. of recorded pixels	4256 × 2848, 3024 × 2016, 2304 × 1536 or 1440 × 960, with a maximum of 12.12 megapixels using signal processing
Sensitivity	Equivalent to ISO 100, 160, 200, 400, 800 or 1600 *1
Recording modes	Still images: DCF-compliant Compressed: Exif Ver.2.2 JPEG, DPOF-compatible Uncompressed: Exif Ver.2.2 TIFF-RGB, DPOF-compatible, CCD-RAW *2 Audio: Exif Ver.2.2 audio file standard-compliant
Recording media	Slot 1: SmartMedia (3.3 V) Slot 2: Microdrive (CF+ type II) Some of Compact Flash may not work properly
LCD monitor	1.8-inch 110,000-pixels low-temperature polysilicon TFT color LCD panel (approx. 100% coverage for playback)
Lens mount	Nikon F mount (with AF coupling and AF contacts)
Interchangeable lenses	See P.18.
Focal length	Approx. 1.5× the nominal focal length of the lens (35mm camera equivalent)
Viewfinder	Eye-level type with pentaprism and built-in diopter adjustment (coverage: approx. 93% vertical and approx. 95% horizontal)
Focus	Auto focus, TTL phase detection with auxiliary AF lamp
Lens servo	‘‘S’’ (single AF servo), ‘‘C’’ (continuous AF servo), ‘‘M’’ (manual)
Focus areas	1 focus area selected from 5 focus areas
AF area mode	Single-area AF, Dynamic AF (with a closest-subject priority dynamic AF function)
AF lock	AE/AF lock button. Can also be operated by pressing the shutter button halfway in single AF servo mode.
Metering modes	TTL open metering Selectable from 3 metering modes (restrictions apply on some lenses) ● 3D 10-zone Matrix, Center-weighted, Spot
Exposure modes	P: Multi-programmed Auto (Flexible Program also available), S: Shutter-priority Auto, A: Aperture-priority Auto, M: Manual
Release modes	Single-frame, Continuous shooting (up to 7 frames), Self timer (2, 5, 10 or 20 sec.), Multi-exposure
Exposure compensation	±3 EV (in 1/2 EV step increments)
Auto bracketing	No. of shots: Up to 3; Exposure offset: ±2 EV in 1/2 EV step increments
AE lock	BV memory type using AF/AE lock button
Shutter	Electronically controlled descending-type focal-plane shutter
Shutter speeds	30 to 1/4000 sec, Bulb *3
White balance	AUTO, Sunny, Shade, Fluorescent 1, Fluorescent2, Fluorescent3, Incandescent and Custom (2 positions)
Image quality settings	Color, Tone (gradations), Sharpness
Built-in flash	Manual pop-up type. Guide No. 12 (ISO 100, m) Synchronizing shutter speeds: 1/125 sec. and slower Synchro modes: Front Synchro, Slow Synchro, Rear synchro, Red-eye Reduction and Red-eye Reduction Slow Synchro
Accessory shoe	Hot shoe (with synchro contacts, ready signal contacts, TTL flash control stop signal contacts, monitor signal contacts and GND) with built-in safety lock feature

Synchro contacts	X contacts only, synchronizing speed: 1/125 sec. or slower
Synchro terminal	Equipped with ISO519 synchro terminal as standard, lock screw provided
Remote release	Release socket on shutter button
Information display	Viewfinder display, Top display panel, Rear display panel
Battery checks	● Battery checking performed for lithium and AA batteries. However, only the AA batteries are checked when no lithium batteries are installed. ● Check levels: 3 levels (full, flat and low). If either the lithium or AA batteries have insufficient charge, a warning is displayed for 3 seconds and then the Auto Power Off function is triggered.
Auto Power Off	Off, 15 sec., 2 min. or 5 min. (disabled when the camera is connected to a PC)
Preview	Preview zoom, histogram display, standard chart display
Playback	Single-frame, playback zoom, histogram display, protect frame, multi-frame playback
Erase	Erase frame, Erase all frames, Format (initialize)
Other	Print ordering (DPOF), Voice memo, Frame No. memory, Custom settings

● Standard Number of Available Shots per Media

The number of available shots varies slightly depending on the type of subject. Also, the discrepancy between the actual number of available shots and the standard number grows as the capacity of the media increases.

Number of recorded pixels	4256 × 2848				3024 × 2016			2304 × 1536			1440 × 960		
Quality Mode	HIGH		FINE	NORMAL	HIGH	FINE	NORMAL	HIGH	FINE	NORMAL	HIGH	FINE	NORMAL
	TIFF-RGB	CCD-RAW			TIFF-RGB			TIFF-RGB			TIFF-RGB		
Image File Size	Approx. 35.5MB	Approx. 12.4MB	Approx. 4.7MB	Approx. 2.2MB	Approx. 17.9MB	Approx. 2.3MB	Approx. 1.1MB	Approx. 10.4MB	Approx. 1.3MB	Approx. 660KB	Approx. 4.1MB	Approx. 690KB	Approx. 350KB
MG-16S (16MB)	0	1	3	6	0	6	13	1	10	23	3	22	44
MG-32S (32MB)	0	2	6	13	1	12	27	3	22	47	7	45	89
MG-64S (64MB)	1	4	13	28	3	26	55	6	45	94	15	92	180
MG-128S (128MB)	3	9	26	56	7	52	112	12	90	189	30	185	362
Microdrive 340MB	9	26	73	156	19	145	307	33	249	525	84	507	992
Microdrive 1GB	29	80	220	469	58	437	912	100	746	1564	254	1492	2986

Input/OutputSockets

VIDEO OUT	For connecting a mini pin jack (3.5 mm dia.) cable for video output to a TV
IEEE1394 socket	For connecting a 4-pin IEEE1394 cable for data exchange with a computer and picture taking from a computer
USB socket	For connecting the special USB cable for data exchange with a computer
DC input socket	For connecting the special AC Power Adapter AC-5VH/AC-5VHS to supply power to the camera

Power Source, etc.

Power source	CR123A lithium batteries (2) AA-size batteries (4) (alkaline or nickel-metal hydride) Special AC Power Adapter AC-5VH/AC-5VHS
Operating conditions	Temperature: 0°C to +40°C. (+32°F to +104°F) (Note that the range for Microdrive is +5°C to +40°C (+41°F to +104°F).) Humidity: 80% or less (no condensation)
Dimensions (W × H × D)	141.5 × 131 × 79.5 mm (5.6 × 5.2 × 3.1 in.) (excluding lens and attachments)
Mass (Weight)	760 g (26.8 oz.) (body only, not including accessories, batteries or recording media)

●Available shots using batteries (When fully charged) *4

Battery type / Media type	Alkaline batteries	Ni-MH batteries HR-3UF 1700 mAh	CR123A lithium batteries
SmartMedia	Approx. 600 frames	Approx. 650 frames	Approx. 1000 frames
Microdrive	Approx. 420 frames	Approx. 450 frames	

Accessories

- Lithium Batteries CR123A (2)
- AA-size Alkaline Batteries (4)
- Strap (1)
- Video Cable (approx. 1.5 m (4.9ft.), mini-plug (3.5 mm-dia.) to pin-plug cable) (1)
- Accessory Shoe Cover (1)
- Camera Body Cap (1)
- LCD Cover (1)
- Eyepiece Cap (1)
- Interface Set (1)
  - CD-ROM: Software for FinePix EX (1)
    Photoshop Element (1)
  - IEEE1394 4-pin to 6-pin cable (1)
  - Special USB cable with Noise Suppression core (1)
  - Software Quick Start Guide (1)
  - Software Supplementary Guide (1)
- Owner's Manual (1)

Optional accessories

- SmartMedia
  - MG-4S: 4MB, 3.3V MG-8S: 8MB, 3.3V MG-16S: 16MB, 3.3V
  - MG-32S: 32MB, 3.3V MG-64S: 64MB, 3.3V
  - MG-16SW: 16MB, 3.3V, ID MG-32SW: 32MB, 3.3V, ID
  - MG-64SW: 64MB, 3.3V, ID MG-128SW: 128MB, 3.3V, ID
- AC-5VH/AC-5VHS AC Power Adapter
- Fujifilm Rechargeable Battery 2HR-3UF
- Fujifilm Battery Charger with Battery BK-NH (Not Available in U.S.A. / Canada)
- SM-R2 Image Memory Card Reader
  Compatible with Windows 98/98 SE, Windows Me, Windows 2000 Professional or iMac or Power Macintosh and models that support USB as standard.
- DM-R1 Image Memory Card Reader
  Compatible with Windows 98 SE, Windows 2000 Professional (read-only), iMac DV and Power Macintosh PCs with FireWire as a standard feature. Mac OS 8.5.1 to 9.1
- PC-AD3 PC Card Adapter
- Hyper-Utility Software HS-S2 (IEEE1394 Interface)

*1: Images shot in high-sensitivity photography (ISO 400 or higher) may appear coarse and may also be affected by noise such as white dots.

*2: CCD-RAW is a format specific to the FinePix S2 Pro. The enclosed ''FinePix Viewer'' software or the optional Hyper-Utility software ''Shooting Software'' is required to interpret the images.

*3: Images shot with long exposures (1 second or longer) may appear coarse and may also be affected by noise such as white dots.

*4: The figures shown for the number of available shots are a guide to the number of consecutive shots that can be taken at normal temperatures with the flash used in 50% of the shots. Note that the actual number of available shots may differ due to variations in the ambient temperature when the camera is used and the amount of battery charge. The number of available shots is lower at low temperatures.

1-2. Features

- The newly developed large-size ‘‘Super CCD’’ built into the FinePix S2 Pro provides an ultra-high resolution, high sensitivity, a large dynamic range and an excellent S/N ratio.
- 6.17 million effective image pixels
- Over 12 million recorded image pixels (4256 × 2848 pixels)
- Supports uncompressed data output for CCD-RAW data
- Wide range of sensitivity settings from ISO 100 to ISO 1600
- Multifunctionality built in to meet the needs of professionals
- 5-point metering AF function
- Shutter speeds from 30 sec to 1/4000 sec.
- Equipped with a synchronizing terminal
- Quick, responsive operation with only 0.5 seconds between shots
- Dual slot for SmartMedia and Microdrives
- Supports 4 types of recorded pixel according to the type of shot
- You can specify independent ISO, color tone, gradation and sharpness settings just as if you were selecting a film type.
- Histogram function for instant exposure checking after you take a shot
- 1.8-inch low-temperature polysilicon TFT color LCD monitor provides 100% coverage
- IEEE1394 and USB connectivity for quick and easy image file downloading
- DPOF-compatible for simple image printing
- Conforms to ‘‘Design for Camera File system’’ standard and Exif ver.2.2 for digital cameras

* ‘‘Design for Camera File system’’ standard and Exif format are formulated by the Japan Electronics and Information Technology Industries Association (JEITA)

Auto Power Off Function: If the camera is not used in any way for a set period, the Auto Power Off function switches the camera off to prevent battery depletion and to avoid wasting power when the camera is connected to the AC power adapter. Preview image display is also cancelled when this function operates.

- The Auto Power Off function does not operate, when a USB connection is being used, or when the Auto Power Off function is switched off during setup.

CCD-RAW: This is the image data prior to signal processing (the reconstruction of the data read in from the CCD as an image). Because the signal processing is performed on the computer, high levels of control are possible.

* To reconstruct images, FinePixViewer (on the enclosed CD-ROM) or the Hyper Utility (optional) must be installed on your computer.

Color Temperature: Low-temperature light sources, such as a candle flame, are strongly red, while high-temperature light sources, such as a gas burner flame, are strongly blue. The color of the light for these temperatures is expressed as a color temperature (K = Kelvin). The light of the sun at midday in a completely clear sky is taken to be 5500K.

EV: A number that denotes Exposure Value. The EV is determined by the brightness of the subject and sensitivity (speed) of the film or CCD. The number is larger for bright subjects and smaller for dark subjects. As the brightness of the subject changes, a digital camera maintains the amount of light hitting the CCD at a constant level by adjusting the aperture and shutter speed.
When the amount of light striking the CCD doubles, the EV increases by 1. Likewise, when the light is halved, the EV decreases by 1.

JPEG: Joint Photographics Experts Group
A file format used for compressing and saving color images. The compression ratio can be selected, but the higher the compression ratio, the poorer the quality of the expanded image.

TIFF-RGB: A format for saving image data in which a tag indicating the file format is attached to each item of data. Files stored in this format can be opened on a personal computer.

WAVE: A standard format used on Windows systems for saving audio data. WAVE files have the ‘‘.WAV’’ file extension and the data can be saved in either compressed or uncompressed format. This camera use PCM recording.

WAVE files can be played back on a personal computer using the following software:

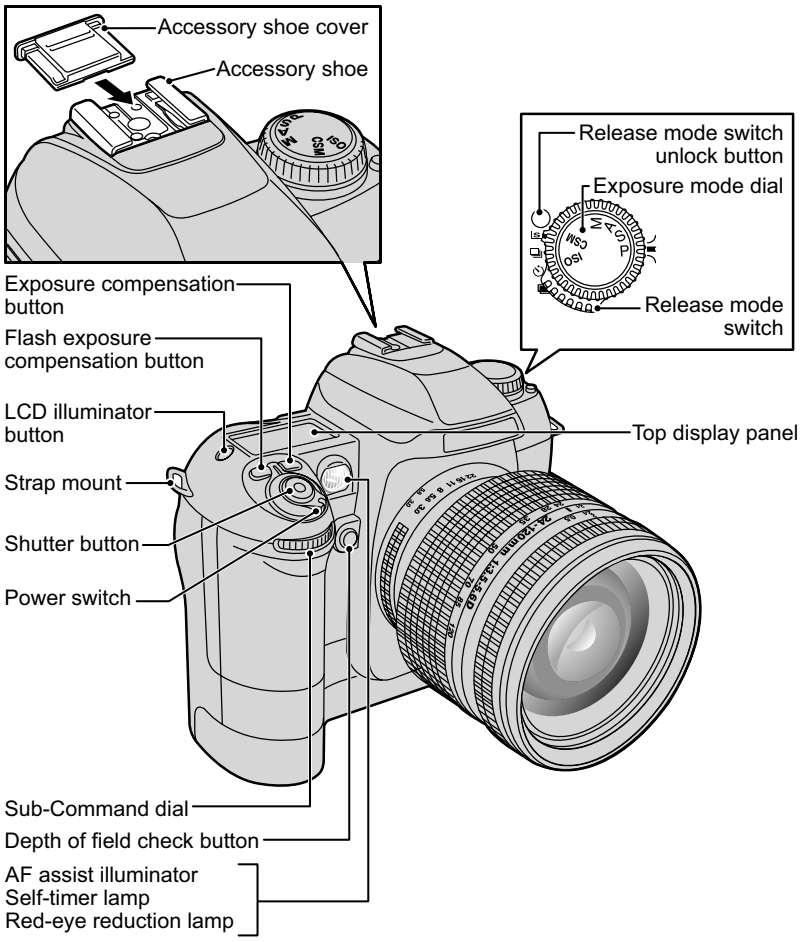
Windows: MediaPlayer

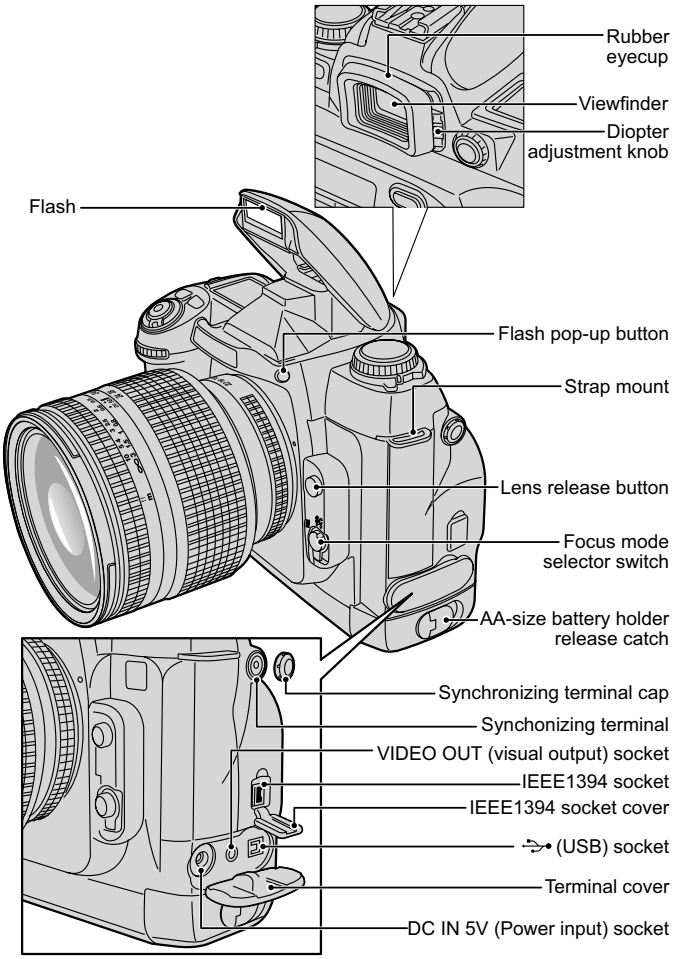
Macintosh: QuickTime Player * QuickTime 3.0 or later

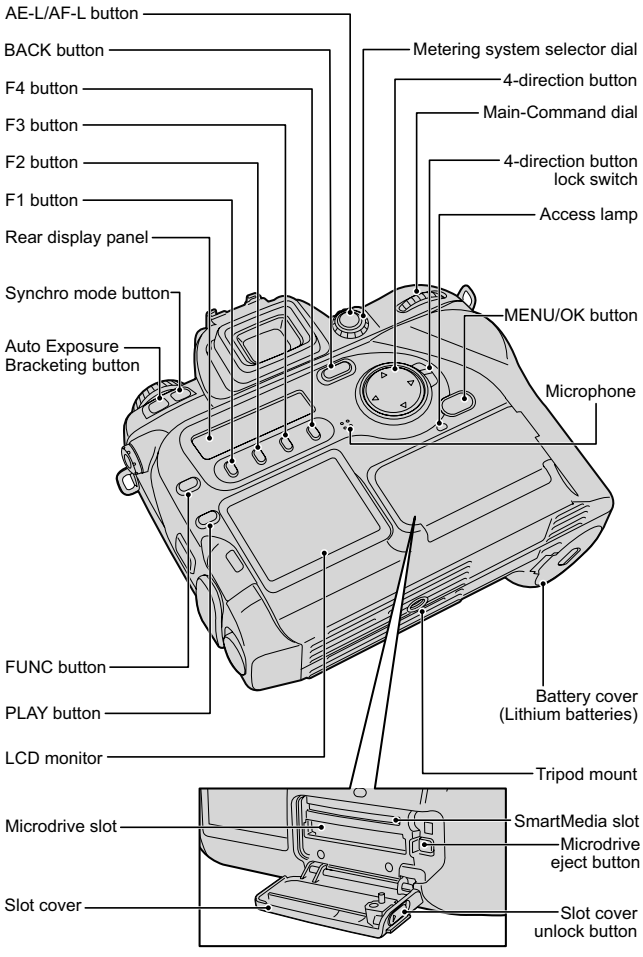
White Balance: Whatever the kind of the light, the human eye adapts to it so that a white object still looks white. On the other hand, devices such as digital cameras see a white subject as white by first adjusting the color balance to suit the color of the ambient light around the subject. This adjustment is called matching the white balance. A function that automatically matches the white balance is called an Automatic White Balance function.

Exif Print: Exif Print Format is a newly revised digital camera file format that contains a variety of shooting information for optimal printing.

1-3.Names of External Components

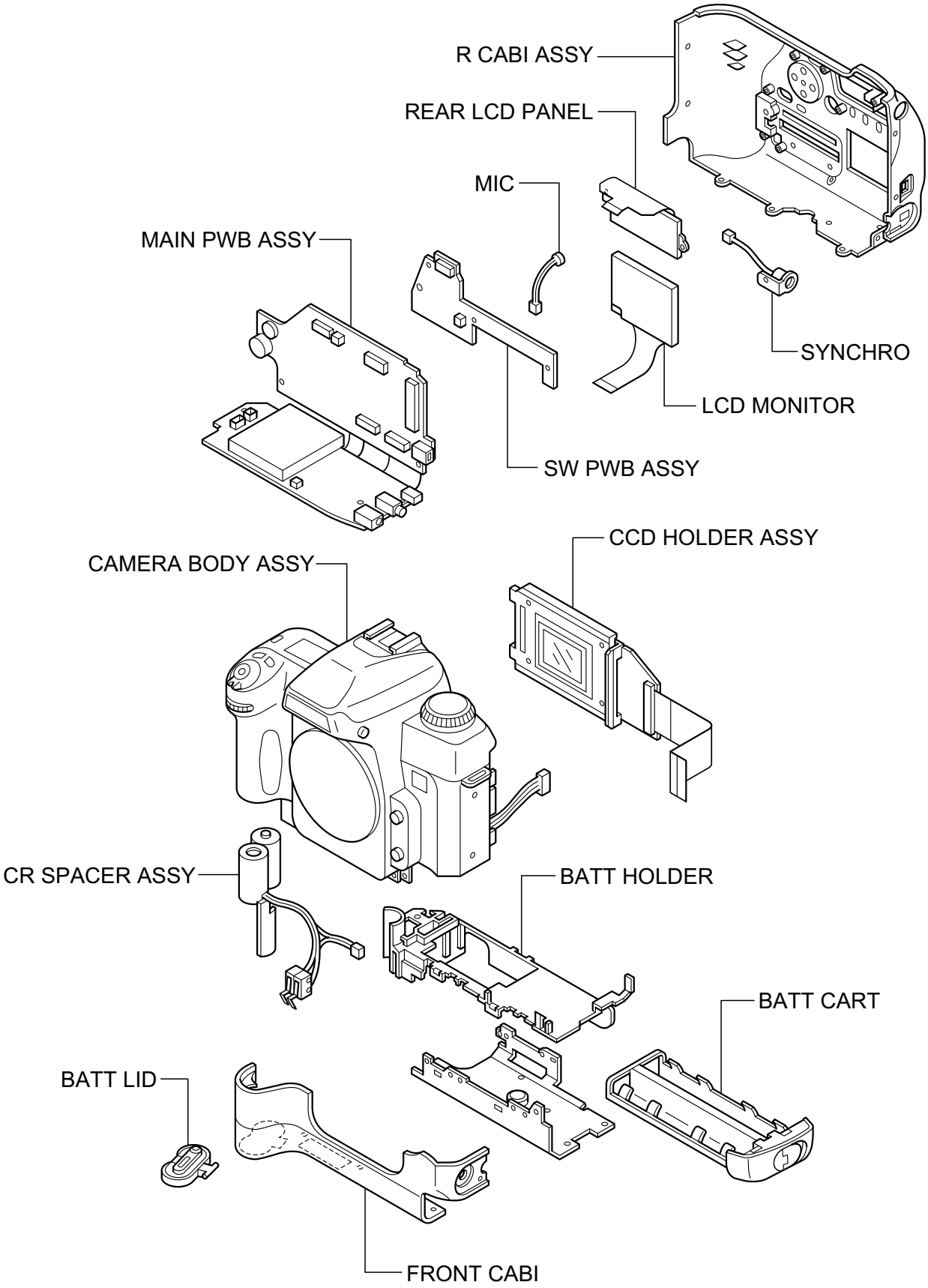



Rubber eyecup
Viewfinder
Diopter adjustment knob
Flash
Flash pop-up button
Strap mount
Lens release button
Focus mode selector switch
AA-size battery holder release catch
Synchronizing terminal cap
Synchonizing terminal
VIDEO OUT (visual output) socket
IEEE1394 socket
IEEE1394 socket cover
(USB) socket
Terminal cover
DC IN 5V (Power input) socket


AE-L/AF-L button
BACK button
F4 button
F3 button
F2 button
F1 button
Rear display panel
Synchro mode button
Auto Exposure Bracketing button
Metering system selector dial
4-direction button
Main-Command dial
4-direction button lock switch
Access lamp
MENU/OK button
Microphone
FUNC button
PLAY button
LCD monitor
Battery cover (Lithium batteries)
Tripod mount
Microdrive slot
SmartMedia slot
Microdrive eject button
Slot cover
Slot cover unlock button

2. Disassembly

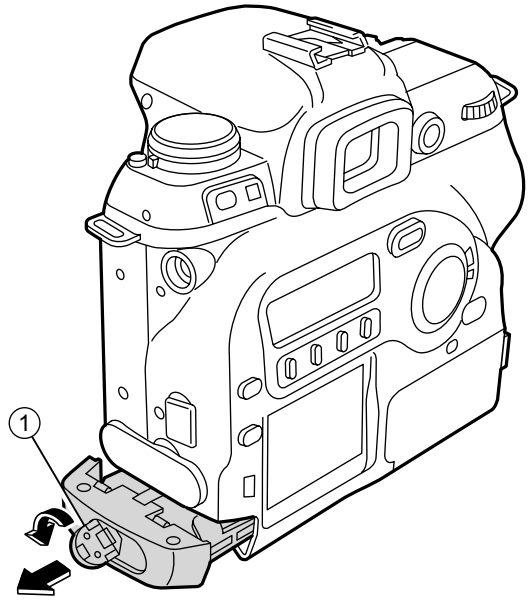
2-1.Names of internal Components



2-2.Removing BATT CART ASSY

Remove in the order indicated by circled numbers.

<Step 1>



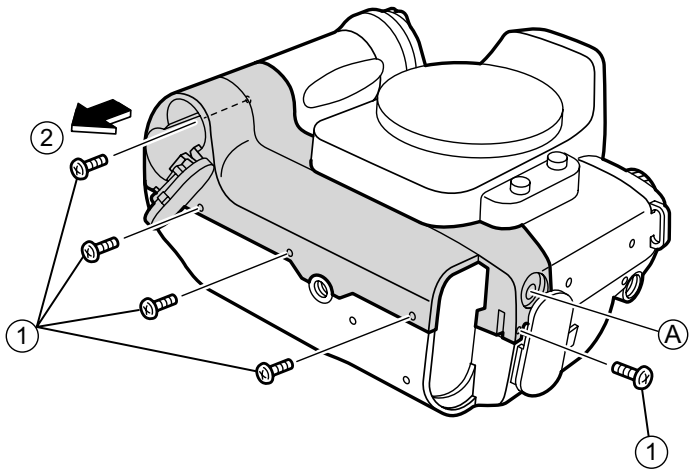
(1)Turn the battery holder lock lever, remove the lock, and pull out BATT CART ASSY.

2-3.Removing FRONT CABI

Remove in the order indicated by circled numbers.

<Step 1>

(1) Remove five screws(BB14857-100, M1.7x3.0).
(2) Remove FRONT CABI in the direction of the arrow.

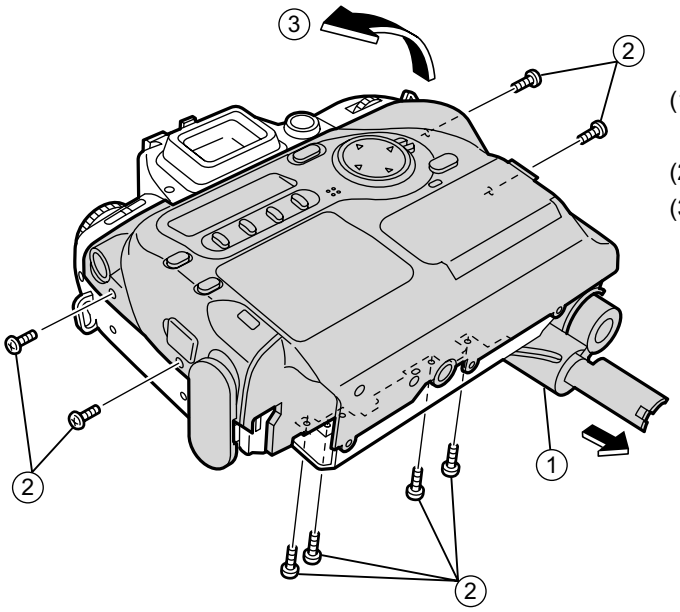


[Notes of assembly of FRONT CABI.]
1.A part must be engaged, and combine FRONT CABI.
2.Confirm there is no space when "FRONT CABI" and "MAIN BODY" are combined, and the screw is tightened.

2-4.Removing DSC BLOCK

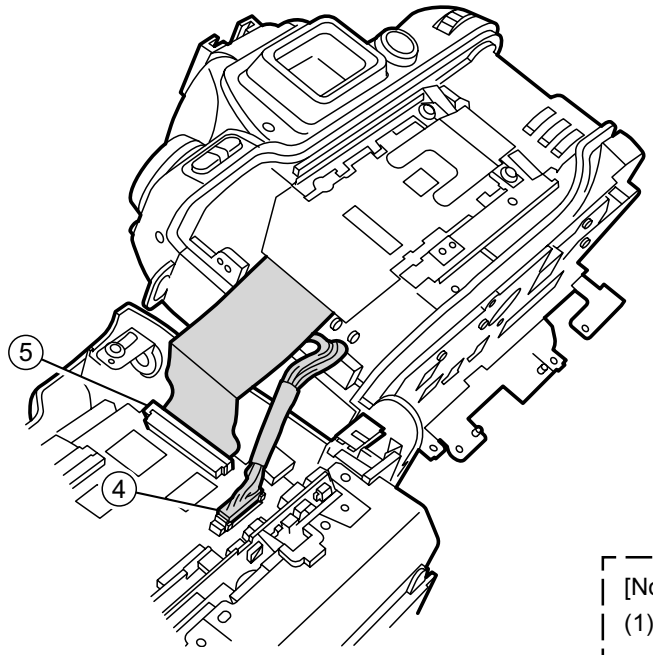
Remove in the order indicated by circled numbers.

<Step 1>



(1) Pull out CR SPACER ASSY from the camera body in the direction of the arrow.
(2) Remove eight screws(BB14857-100, M1.7x3.0).
(3) Remove DSC BLOCK in the direction of the arrow.

<Step 2>



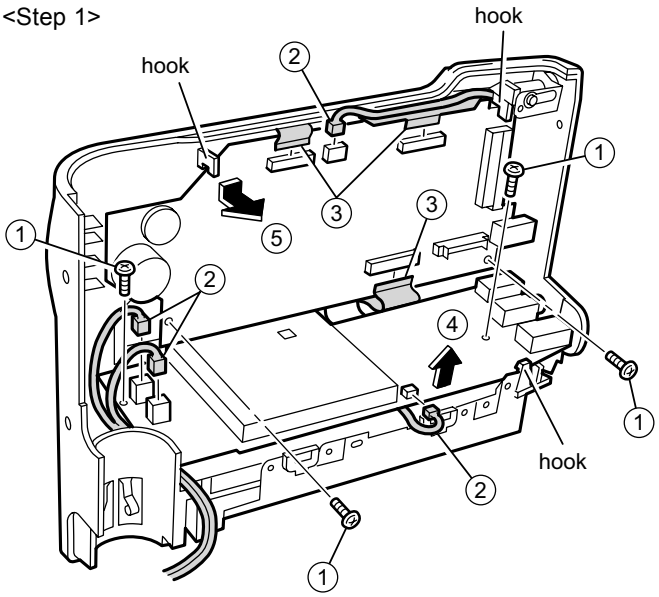
(4) Remove the harness from connector (CN300) of MAIN PWB ASSY.
(5) Remove the lock of connector (CN500) of MAIN PWB ASSY, and remove FFC.

[Notes of assembly of DSC BlOCK.]
(1) Note diagonal insertion and the half insertion when you lock FFC and the harness to the connector.
(2) Confirm there is no space when "DSC BLOCK" and "MAIN BODY" are combined, and the screw is tightened.

2-5.Removing MAIN PWB ASSY

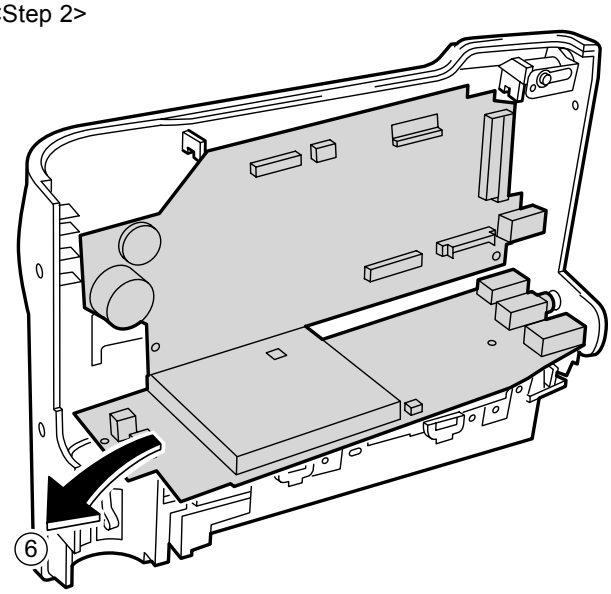
Remove in the order indicated by circled numbers.

<Step 1>



(1) Remove four screws(BB12585-100)
(2) Remove the harness from connector (CN700/701/702/303) of MAIN PWB ASSY.
(3) Remove the lock of connector (CN301/302/200) of MAIN PWB ASSY, and remove FFC.
(4) Remove the hook of BATT HOLDER, and float MAIN PWB ASSY in the direction of the arrow.
(5) Remove the hook of R CABI ASSY, and float MAIN PWB ASSY in the direction of the arrow.

<Step 2>



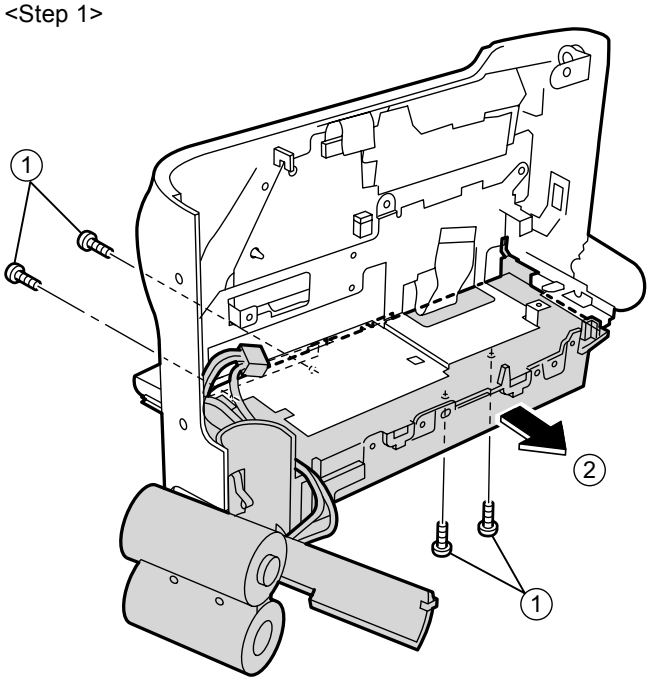
(6) Remove MAIN PWB ASSY in the direction of the arrow.

[Notes of assembly of MAIN PWB ASSY.]
Note diagonal insertion and the half insertion when you lock FFC and the harness to the connector.

2-6.Removing BATT HOLDER ASSY

Remove in the order indicated by circled numbers.

<Step 1>

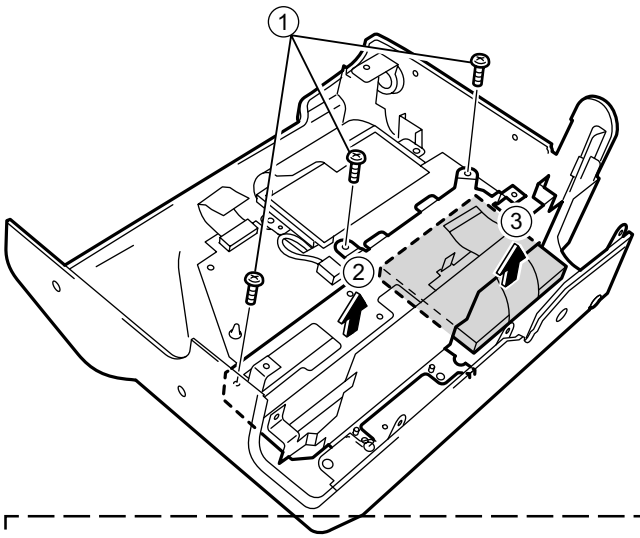


(1) Remove four screws.
(2) Remove BATT HOLDER ASSY in the direction of the arrow.

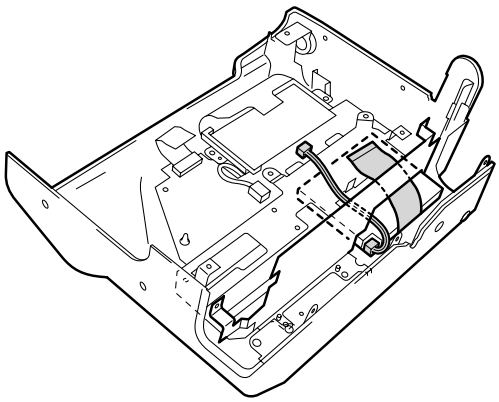
2-7.Removing LCD MONITOR

Remove in the order indicated by circled numbers.

<Step 1>



(1) Remove three screws.
(2) Remove MAIN FRAME ASSY in the direction of the arrow.
(3) Remove LCD MONITOR in the direction of the arrow.

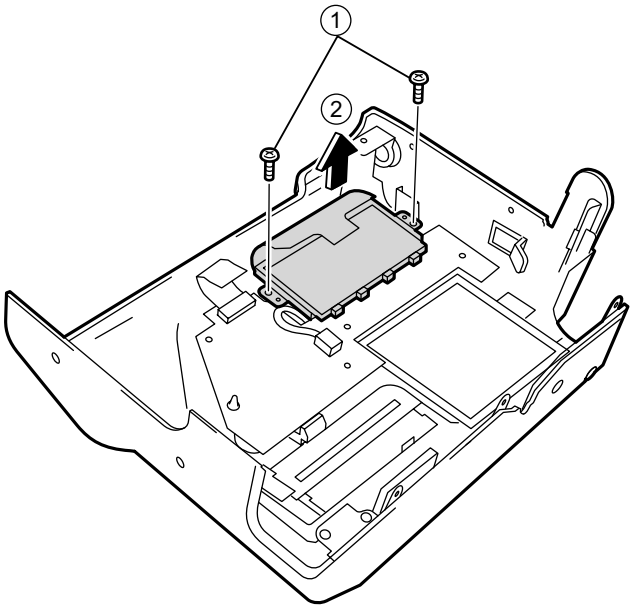


[Notes of assembly of MAIN FRAME ASSY]
Assemble MAIN FRAME ASSY to pinch neither "FPC of LCD MONITOR" nor "FPC of back light" when you assemble MAIN FRAME ASSY.

2-8.Removing REAR DISPLAY PANEL

Remove in the order indicated by circled numbers.

<Step 1>

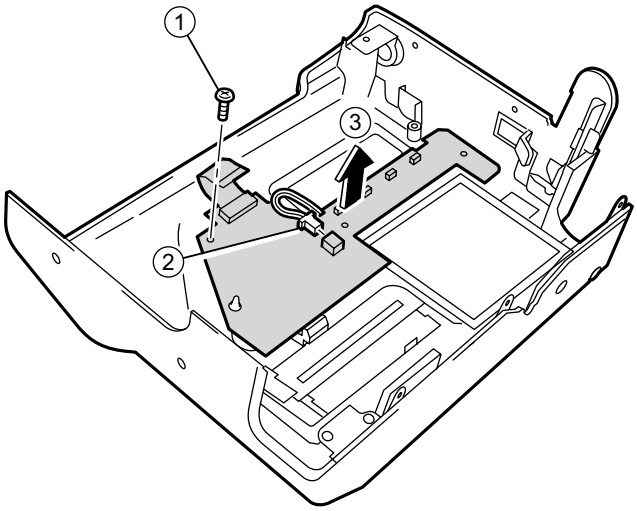


(1) Remove two screws.
(2) Remove REAR DISPLAY PANEL in the direction of the arrow.

2-9.Removing SW PWB ASSY

Remove in the order indicated by circled numbers.

<Step 1>

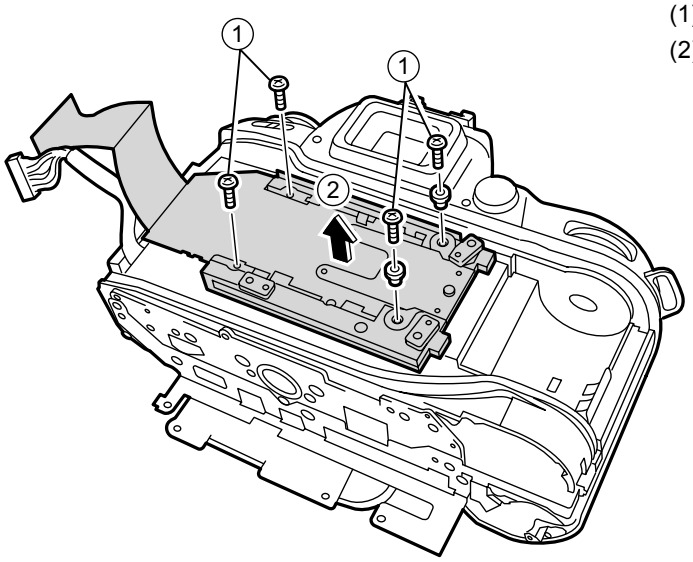


(1) Remove one screws.
(2) Remove the harness from connector (CN900) of SW PWB ASSY.
(3) Remove SW PWB ASSY in the direction of the arrow.

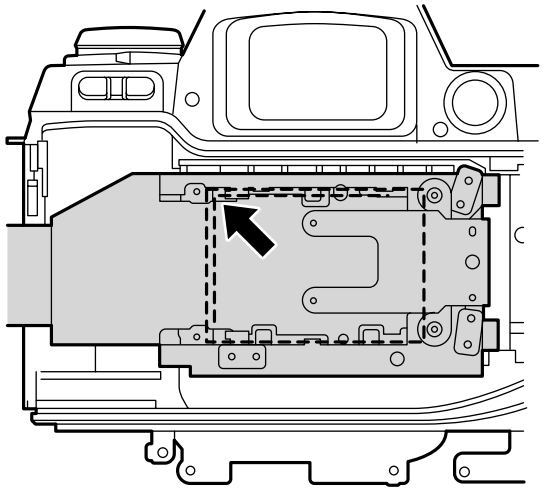
2-10.Removing CCD HOLDER ASSY

Remove in the order indicated by circled numbers.

<Step 1>



(1) Remove four screws.
(2) Remove CCD HOLDER ASSY in the direction of the arrow.



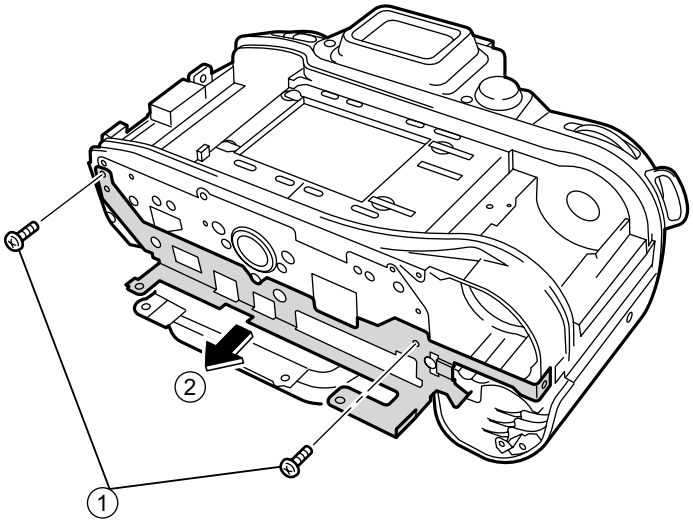
[Notes of assembly of CCD HOLDER ASSY]
Tighten the machine screw according to one side (direction of the arrow) when you stop four screws.

2-11.Removing PLATE BOTTOM

Remove in the order indicated by circled numbers.

<Step 1>

(1) Remove two screws.
(2) Remove PLATE BOTTOM in the direction of the arrow.

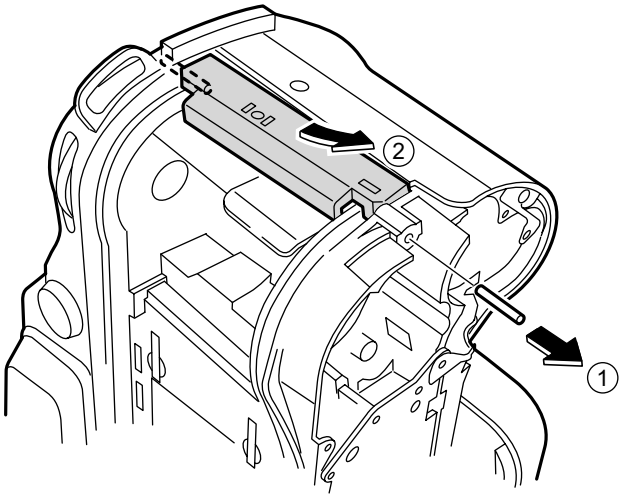


2-12.Removing GRIP BASE

Remove in the order indicated by circled numbers.

<Step 1>

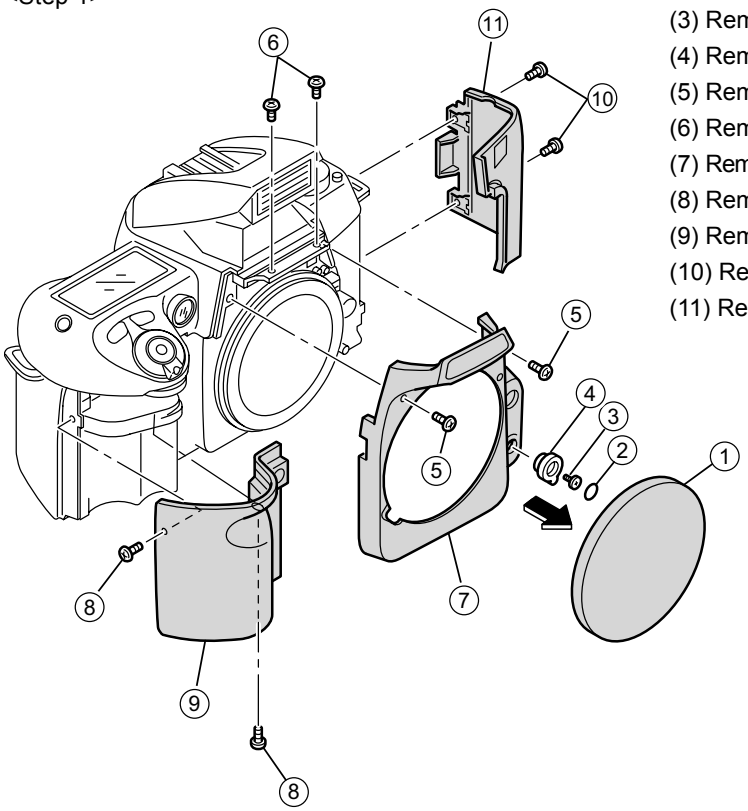
(1) Remove SHAFT.
(2) Remove GRIP BASE in the direction of the arrow.



2-13.Removing TOP COVER UNIT

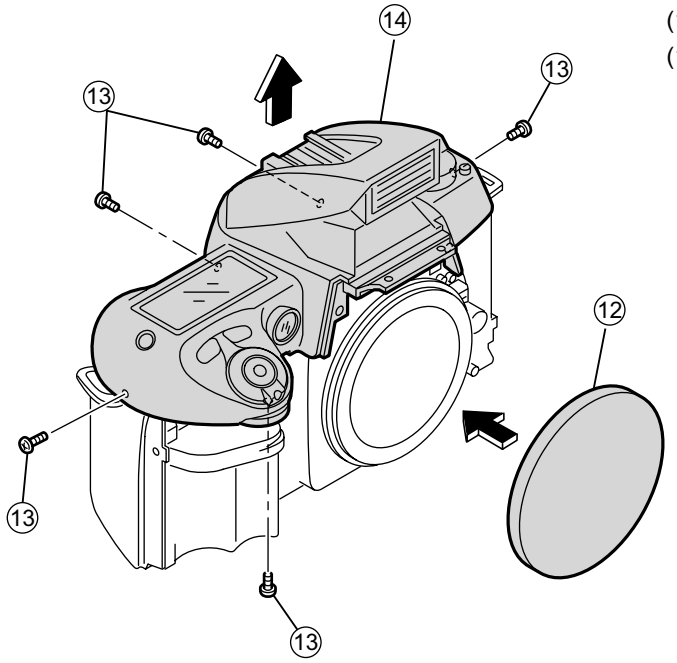
Remove in the order indicated by circled numbers.

<Step 1>



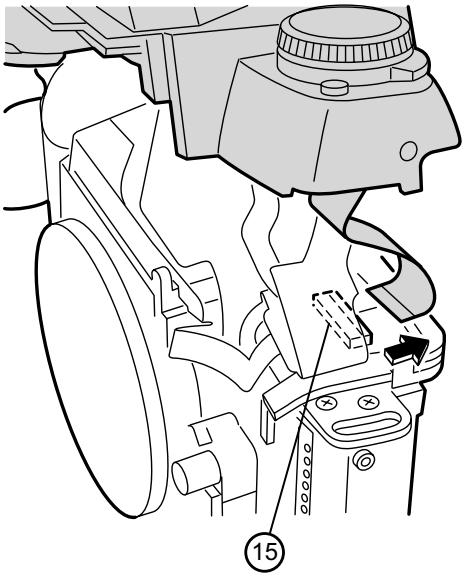
(1) Remove the lens cap.
(2) Remove A/M COVER PLATE.
(3) Remove one screw.
(4) Remove A/M CHANGE LEVER.
(5) Remove two screws.
(6) Remove two screws.
(7) Remove FRONT COVER UNIT in the direction of the arrow.
(8) Remove two screw.
(9) Remove GLIP COVER in the direction of the arrow.
(10) Remove two screws.
(11) Remove SIDE COVER in the direction of the arrow.

<Step 2>



(12) Do the lens cap.
(13) Remove five screws.
(14) Float TOP COVER UNIT in the direction of the arrow.

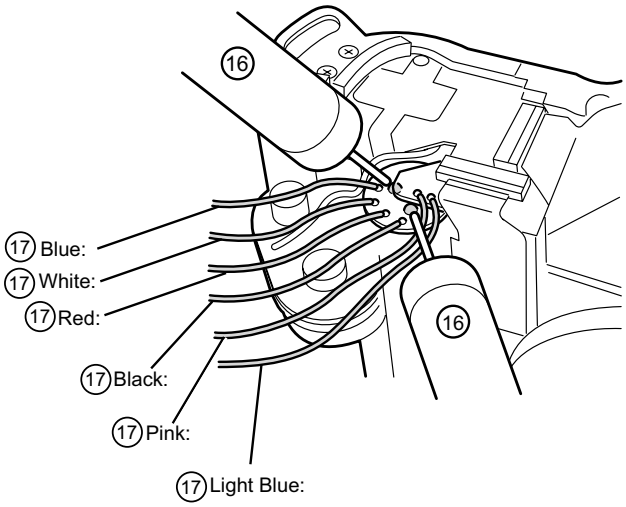
<Step 3>



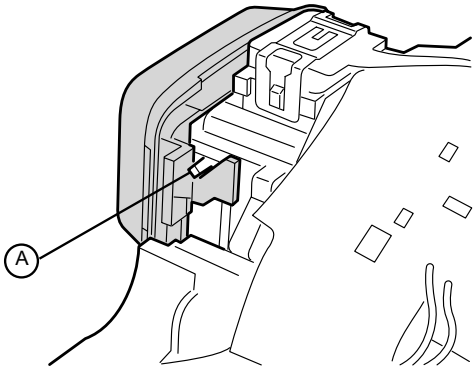
(15) Remove FPC from the TOP COVER side, and remove TOP COVER UNIT to the grip side.

* As for the grip side, the harness is stopped with solder.

<Step 4>



⚠⚠
(16) Discharge electricity before removing the harness.
(17) Remove six harness, and remove TOP COVER UNIT completely.

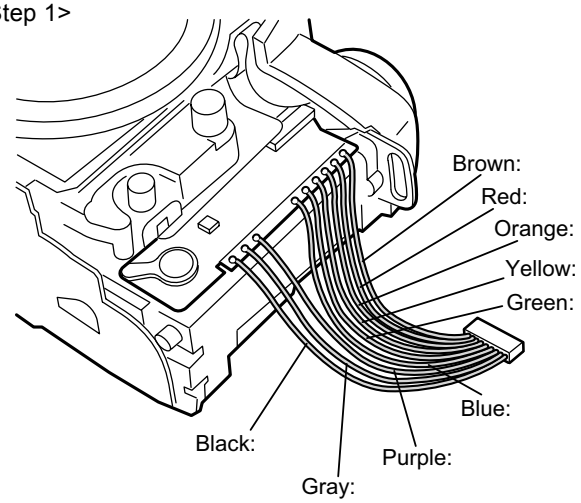


[Notes of assembly of TOP COVER UNIT]
Hang part A inner EYE PIECE BARREL UNIT.
And, build in TOP COVER UNIT.

2-14.Removing BODY FPC HARNESS

Remove in the order indicated by circled numbers.

<Step 1>

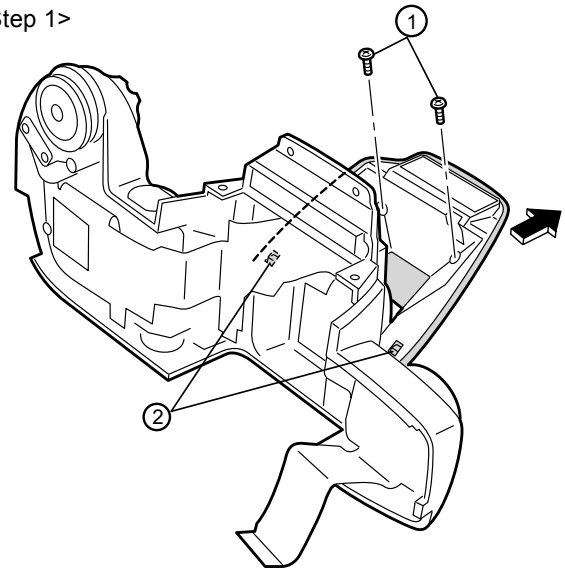


(1) Remove soldering from CAMERA BODY, and remove BODY FPC HARNESS.

2-15.Removing SB LOWER CASE UNIT

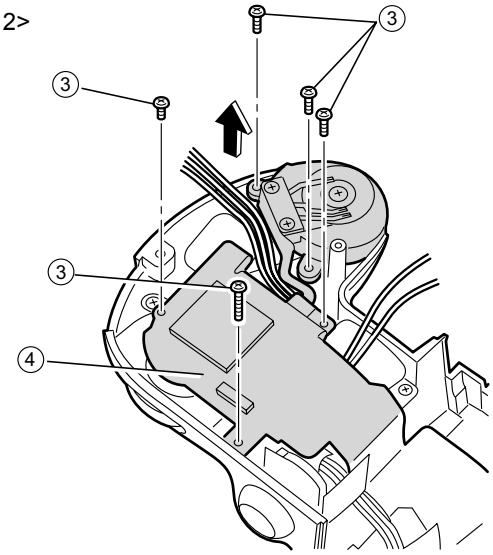
Remove in the order indicated by circled numbers.

<Step 1>



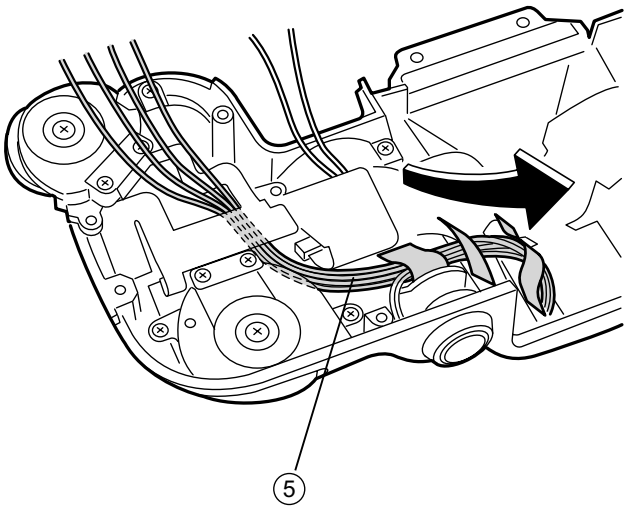
(1) Remove two screws.
(2) Remove the hook in two places.

<Step 2>



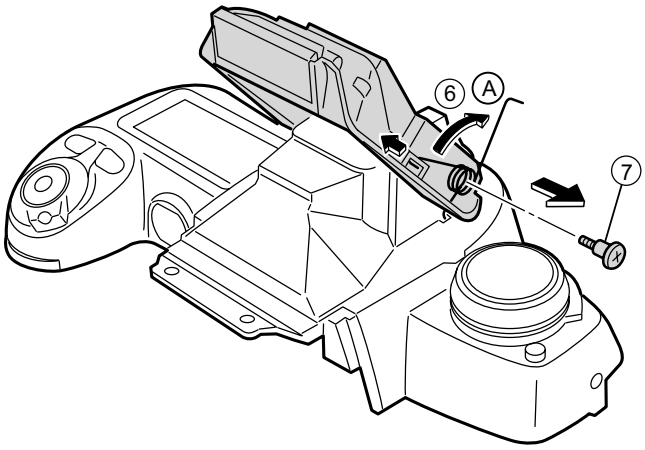
(3) Remove two screws.
(4) Float TOP COVER FPC.

<Step 3>



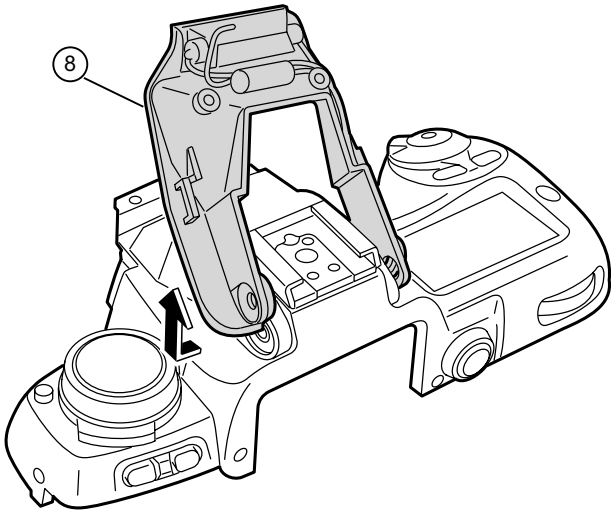
(5) Pull out the harness of the flash in the direction of the arrow after floating TOP COVER FPC.

<Step 4>



(6) Remove FLASH UP SPRING in the direction of A.
(7) Remove one screws.

<Step 5>



(8) Remove SB LOWER CASE UNIT in the direction of the arrow.

3.Schematic

3-1.Cautions

<Caution when replaceing chip (leadless) parts.>

* Do not re-use the removed parts, but use new parts.
  Be careful that the negativ side of the tantalum capacitors are susceptible to heat.
* Voltage indications are omitted for capacitors other than chemical and tantalum capacitors with a dielectric strength of 50 V or less.All units are uF (p shows pF).
* Chip resistors without indication are 1/10 W.
* k=1000 Ω , M=1000 kΩ
* Variable resistors and semi-variable resistor are abbreviated the specification of B characteristic.

3-2.Basic block name and function explanation

Board Name	Block name	Function
CCD PWB UNIT	CCD BLOCK	* CCD output(IC100)
MAIN PWB ASSY	CAM BLOCK	* Analog to digital conversion of CCD output (IC501) * CCD driver (IC500)
	SYSTEM BLOCK	*CAMERA BODY management (IC306)
	PROCESS BLOCK	* Video signal processing (IC306) * USB communication (IC306) * System control/SW detection management (IC306)
	POWER CONT BLOCK	* Power supply management(IC702) * LCD backlight supply
	LCD BLOCK	* LCD control (IC201)
	IEEE1394 BLOCK	*IEEE1394 communication (IC1001)
SW PWB ASSY	SW BLOCK	* Operation SW

3-3.Description of the Main Block Functions

3-3-1 Overview of the New Technologies

A range of new technologies have been used in this model, and an overview of these is given below.

(1)Improved sensitivity*1 (ISO 1600) and better resolution have been achieved by using a new CCD element that utilizes the 3rd generation Super Honeycom CCD (HA-CCD) structure used in the FinePix S602 but increases the size to APS-film size (23.3 x 15.6 mm), giving a 6.17 megapixel array with primary color filter.
(This new CCD provides a higher resolution than the FinePix S1 Pro without reducing the S/N ratio, while also allowing photography at the low ISO 100 sensitivity.)

(2)The optical low-pass filter uses liquid crystal to minimize electrostatic charge, thereby reducing the amount of dust on the CCD. The surface of the CCD O.LPF has also been given a hard coating to make cleaning easier and more effective.

(3)Image data compression and expansion is performed by the hardware (UCS1; IC306)*2, allowing shorter intervals between shots at an image size of 4256 pixels x 2848 lines. (The same hardware as the FinePix-S602 is used.)

(4)The camera body used is based on the Nikon F80 camera and takes Nikon's interchangeable lenses.

(5)In response to strong demand from business users, a high-speed IEEE 1394 interface has been provided, along with the addition of a CCD-RAW format recording function.

*1The Honeycom signal processing roughly doubles the valid number of image pixels, concentrating the data for 4 pixels into one. This process quadruples the signal level (sensitivity), doubles the S/N (signal-to-noise) ratio and allows shots to be taken at sensitivity settings up to ISO 1600.

*2The hardware (UCS1; IC306) consists of an M32R core, SRAM and a single chip that provides both the standard peripheral I/O functions and the functions required by the DSC system. The standard peripheral I/O modules (CPU peripheral I/O module) comprise an interrupt controller (ICU), system controller (SYSC), DMA controller (DMAC), clock controller (CLKC), SDRAM controller (SDRAMC), block select controller (BSELC), serial I/O (SIO) interface, USB (USB) interface, multi-function timer (MFT), watchdog timer (WDT), programmable I/O port (PIO), AD converter (ADC) and DA converter (DAC). In addition, a JPEG controller (JPEG), signal processor (YCPRO), internal buffer controller (IBFC), AUTO processor (IBFC), media controller (MEDIA), encoder (ENCD), character generator (CGEN), LCD controller (TFDC), IEEE 1394 interface (EXIO) and MPEG-2 interface (EXIO) are included as the function modules required for the DSC system (image I/O modules).

3-3-2 Block function descriptions

(1) Imaging circuit (CCD BLOCK) (CAM BLOCK)
The analog video signals output from the new APS-size Honeycom CCD (APS-size 6.17-megaixel CCD) are processed using false-color correction (CDS), optimized spacing (CDS), amplification (AGC) and signal mixing (CDS) in a single CSP-IC chip (IC501; abbreviated as SCS3A), before being converted (A-D) to 12-bit digital signals. The CSP-IC also incorporates the "TG/SSG" function, previously provided as a separate IC, onto one chip. The converted digital signals are then sent to the signal processing IC (abbreviated as UCS1; IC306; CSP).

(2) Image processor (PROCESS BLOCK)
(Input data from the CCD)
The 12-bit digital image data (the section corresponding to 1H) generated by the imaging unit (CCD-CAM BLOCK) is sent to the signal processing IC (abbreviated as UCS1; IC306), where buffer processing is performed in the IC's internal buffer to convert the signals to 32-bit (16-bit x 2) data (CCD-RAW data). The converted 32-bit data (CCD-RAW data) is stored in the 16MB SDRAM (IC307 to IC310) via the I/O bus for the image signal processing IC. The image data for each frame (4256 pixels x 2848 lines) is temporarily stored in SDRAM. Also, the 32-bit image data input to the signal processing IC (abbreviated as UCS1; IC306) is used for additions performed by the AUTO computing unit and then sent to the CAM BLOCK SCS3A (IC501) so that the optimal AE, AWB and AF values are obtained.
(Recording onto the SSFDC/Microdrive)
The image data stored in the SDRAM (IC307 to IC310) is sent one line at a time to the signal processor IC (IC306; UCS1; CSP) via the I/O bus in the signal processor IC. In the signal processor, the data is unpacked and the following processes are called: 16 bit -> 10 bit conversion; preprocessing such as digital clamping, gamma correction, and 10-bit -> 8-bit conversion for the R, G and B channels; YC processing to convert the 8-bit RGB signals to Y:Cb:Cr=4:2:2, after which the Y, Cr and Cb 8-bit image data is returned to the internal buffer. In the internal buffer, the 8-bit Y, Cr and Cb signals are sorted into a data format that facilitates DCT compression before being recorded onto an SSFDC or Microdrive via the JPEG calculation unit and media controller.
(Image playback from the SSFDC or Microdrive)
The compressed image data on the SSFDC is sent to the signal processing IC (abbreviated as UCS1; IC306) as 8-bit image data and then sent to SDRAM (IC307 to IC310) via the media control unit, the DMA unit and the internal buffer control unit. The image data temporarily stored in SDRAM (IC307 to IC310) is then returned to the signal processor IC (abbreviated as UCS1; IC306) and sent to the signal processor unit via the media controller and JPEG calculation unit. The signal processor unit performs postprocessing in which the 8-bit Y:Cr:Cb image signals are converted to 8-bit R, G and B signals. At the same time, the character display signals are superimposed and sent to the LCD BLOCK.
The imaging system adjustment data is stored in F_ROM (IC314).
The 8-bit brightness and color-difference signals processed by the signal processing IC (UCS1; IC306) are D-A converted in the image signal processing IC encoder unit and the display character signals are superimposed, producing analog RGB signals. Video (a composite video signal) is also included at the same time in the B component of the RGB signal output. When the VIDEO terminal is inserted into the camera, a composite video signal is automatically output by the detector.

(3) LCD Controller (LCD BLOCK)
The RGB analog signals output from the image signal processing IC encoder block are sent to the LCD controller IC (IC201), where they are converted to digital RGB signals. The LCD controller IC also controls the LCD panel gradations at the same time.

3-3-3.Description of the Power Supply Block Functions

The power supply circuit mounted on the MAIN PWB ASSY board generates a 3.3-volt (IEEE-IC IC1001, UCS1 IC306, SCS3A IC501, CARD IC201, +16V/-9.0V (CCD power supply)), 7.5-volt (LCD backlight power supply) or 12-volt (LCD panel) supply.

3-3-4.Description of the camera body block functions

The main CPU governs AE calculation and control, AF calculation and control, shutter control, and all communication, including communication with the DSC unit.

Generation of the power supply and the viewfinder LCD are directly controlled by the SUB CPU.

The interface IC on the MAIN PCB operates as an interface with the AF signals from the linear line sensor (in the CCD FPC) and sends the AF data to the MPU. It then receives control signals from the MPU and uses these to drive the AF motor. This IC also controls built-in flash charging and the viewfinder LED.

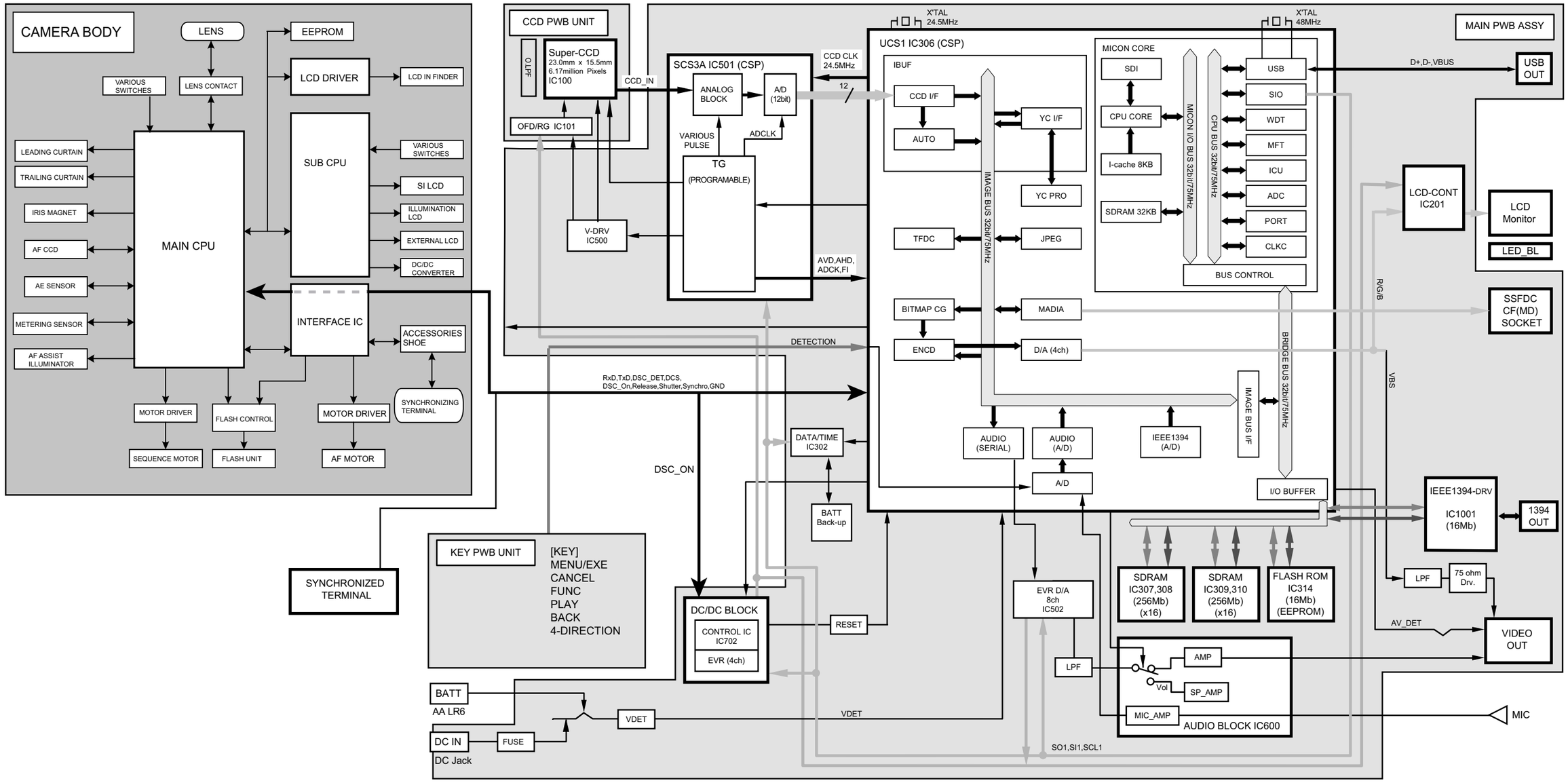
The camera adjustment parameters are stored in the EEPROM on the MAIN PCB.

The light-metering IC in the pentaprism FPC sends 6-zone light-metering data chronologically to the MPU on the MAIN PCB.

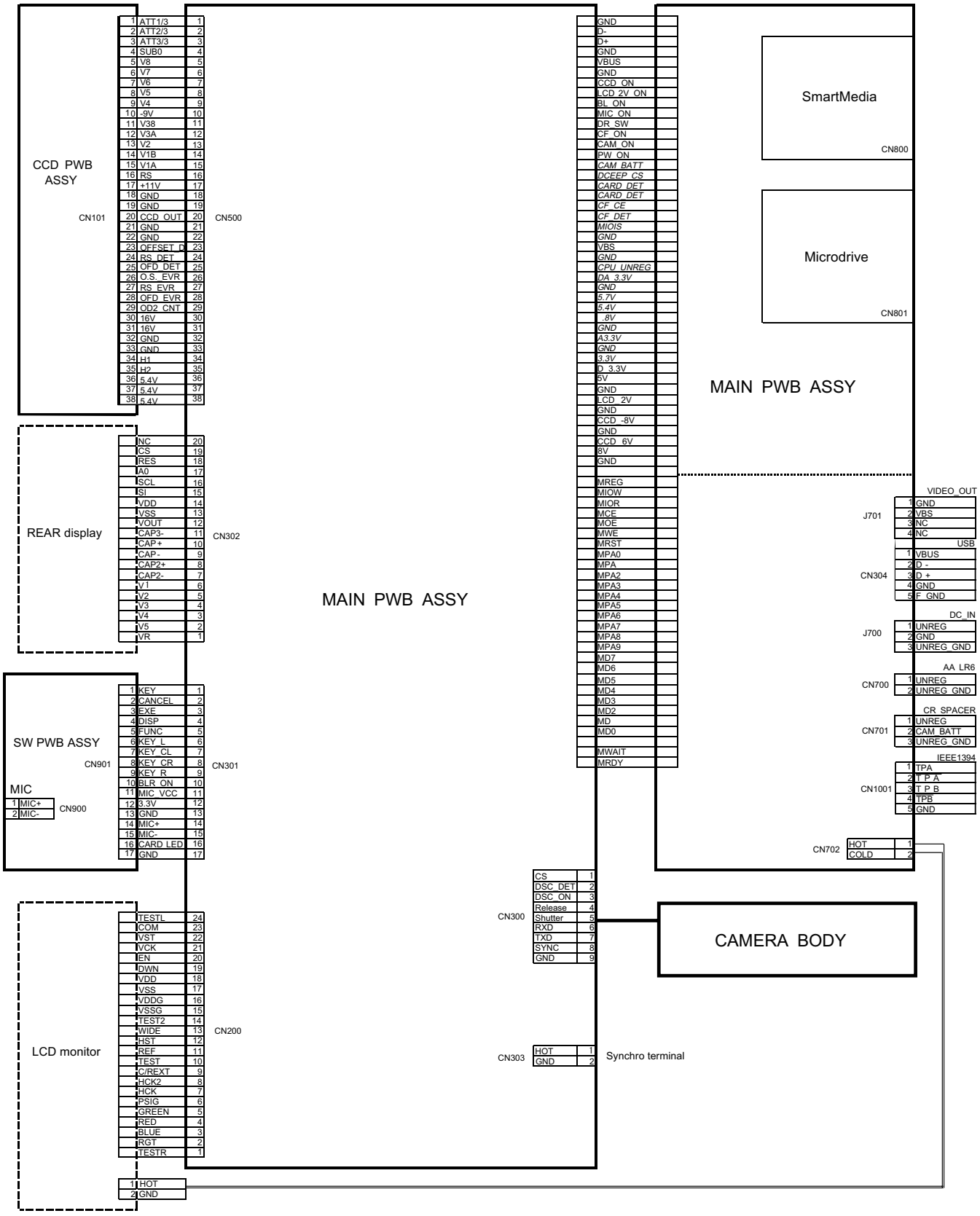
The AF motor drives AF lenses.

The CCD in the CD FPC is a linear line sensor that performs image detection for AF.

3-4. Block Diagram



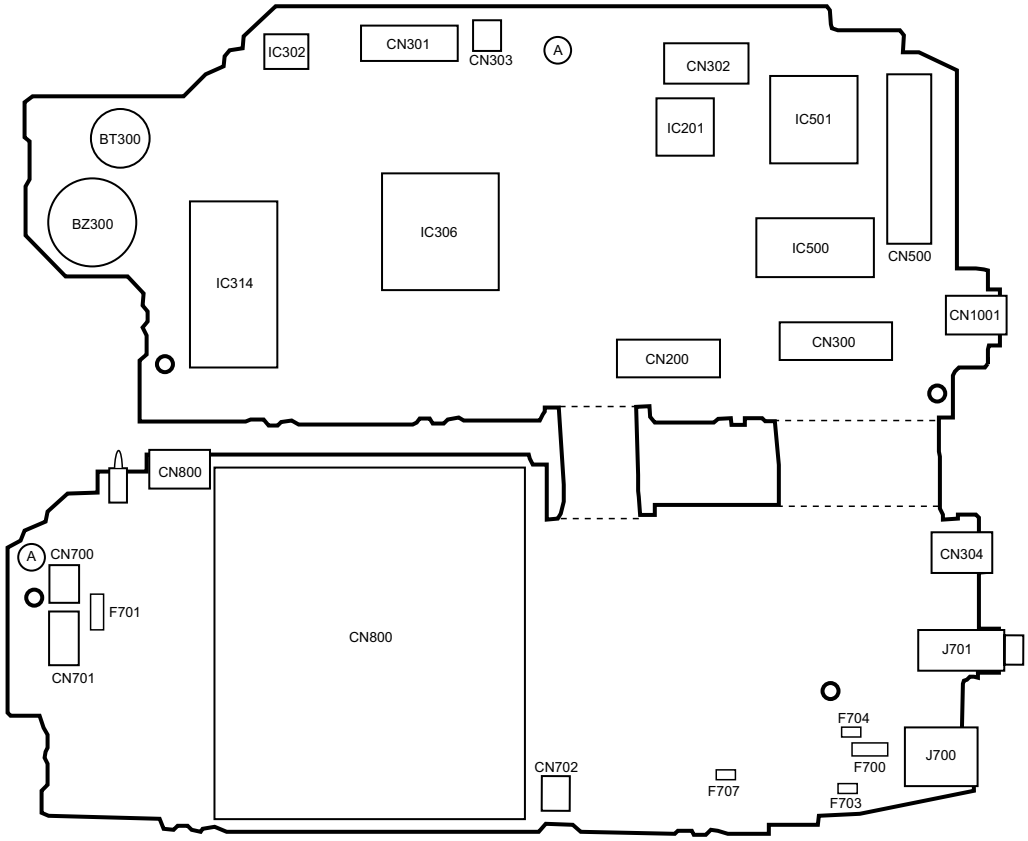
3-5. Overall Connections



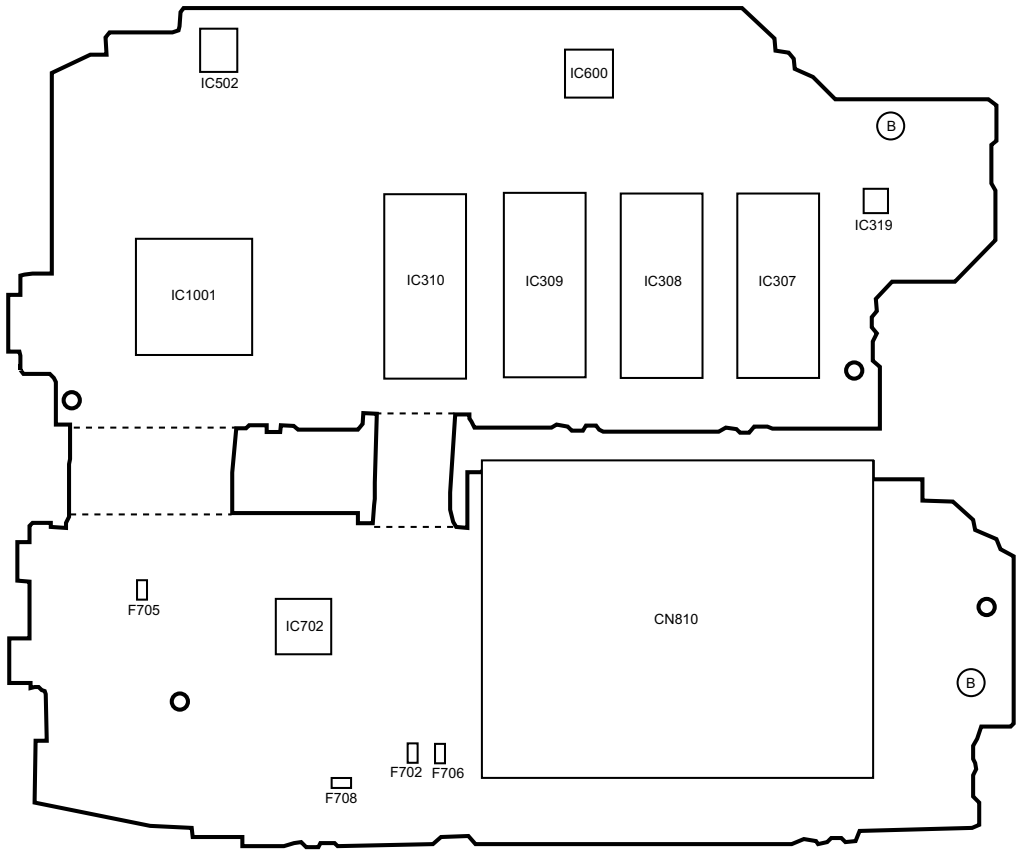
3-6.Board mounting diagram

3-6-1.Printed wiring board of MAIN PWB ASSY.

< A side >

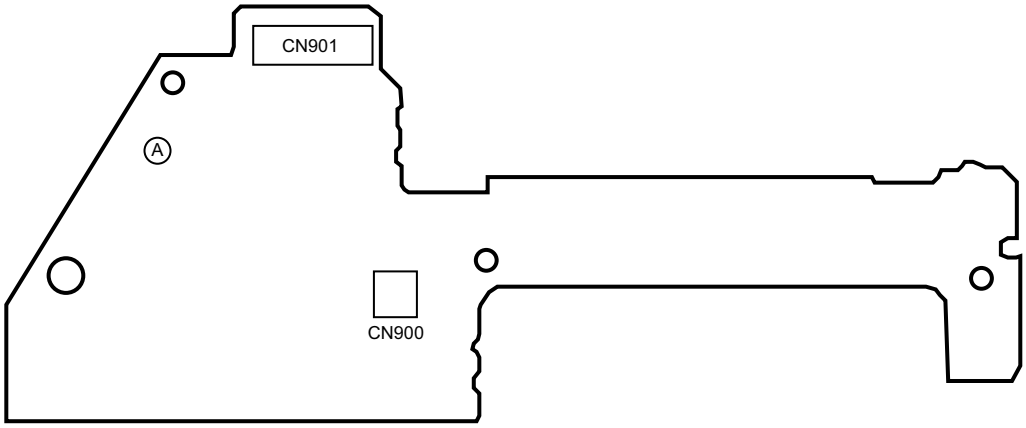


< B side >

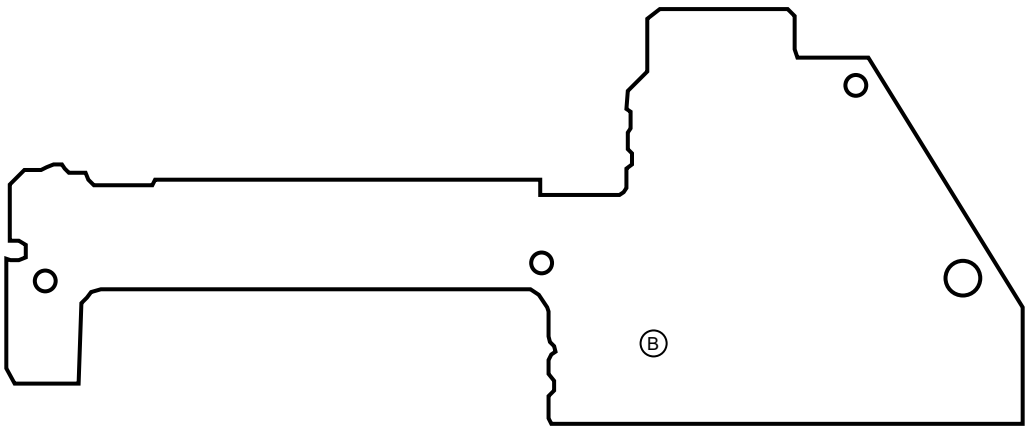


3-6-2.Printed wiring board of SW PWB ASSY.

< A side >



< B side >



4.Adjustment

4-1. Checklist for Major Component Replacement

When replacing the MAIN PWB ASSY, CAMERA BODY ASSY, CCD HOLDER ASSY, or REAR LCD PANEL, check the items marked with a circle (O) in the table below.
(These adjustments are not required when replacing items other than the units listed in the table.)

Replacement component / Adjustment	MAIN PWB ASSY	CAMERA BODY *3	CCD HOLDER *1	REAR LCD PANE
CCD defect correction adjustment *1	O		O	
Camera adjustment	O	O	O	
Battery voltage adjustment	O	O	O	
Flash adjustment	O	O	O	
AF adjustment	O	O	O	
Rear lcd panel adjustment	O			O
End Setting *2	**Make all adjustments after replacing the above parts.**			
Firmware download *4	**Do not use this adjustment until there is an instruction.**			

*1 The CCD defect data floppy disk cannot be provided with MAIN PWB ASSY units supplied as after-sales service parts. (This is because the CCD defect data is supplied together with the CCD HOLDER ASSY.)
Accordingly, the "CCD defect correction/adjustment" repair/adjustment procedure performed when the MAIN PWB ASSY is replaced is given below.

(1)Make a note of the serial number written on the back of the CCD (IC100) mounted on the CCD HOLDER ASSY of the camera under repair.

(2)In the list of CCD defect data files, locate the CCD defect data that matches the serial number noted in the previous step and copy that data onto a floppy disk.

(3)Use the disk containing the copied data to implement CCD defect correction.
Supplement: As with previous models, this is due to the difficulty of removing and using the Flash_ROM (IC314) mounted on the MAIN PWB ASSY in the FinePix S2 Pro.

*2 You must always select "END Settings" at the end of a series of adjustments. If the camera is returned to the customer without specifying the exit settings in this way, the camera will not communicate with a computer.

*3 When replacing the camera body, always perform the "Nikon repair request settings" before replacing the camera body. The camera body replacement adjustments should also be performed when a camera is returned from Nikon following a request for repairs.

*4 The firmware download command is only used when an internal camera software problem is discovered and an upgrade is required. At this point (15/6/02), there are no plans for a firmware upgrade.
(Supplement:At this point (15/6/02), the firmware version for the FinePix S2 Pro(U)(E) is "1.56".)

4-2. Adjustment Sequence for Major Component Replacement

Camera body replacement: CAM adjustment -> Battery adjustment -> Flash adjustment -> AF adjustment -> End setting

MAIN PWB ASSY replacement: CCD defect correction adjustment -> CAM adjustment -> Battery adjustment -> Rear lcd panel adjustmen -> Flash adjustment -> AF adjustment -> End setting

CCD HOLDER ASSY replacement: CCD defect correction adjustment -> CAM adjustment -> Battery adjustment -> Flash adjustment -> AF adjustment -> End setting

REAR LCD PANEL replacement: Rear lcd panel adjustmen -> End setting

(Note) If CAM adjustment is performed without a component being replaced, use the Flash adjustment -> AF adjustment sequence for the adjustment.

4-3. Measuring Instruments Used

Measuring instrument	Remarks
Stabilized power supply	For adjustment
Pattern box	PTB450 or equivalent
Waveform monitor	For function checks
Digital voltmeter	For adjustment
Personal computer	For various adjustments and operational checks (PC-AT compatible, Windows Me).
Luminance meter	LS-110 (Minolta) or equivalent
Color thermometer	Color Meter IIIF (Minolta) or equivalent
TV monitor	NTSC TV monitor, minimum resolution 600 lines (for function checks).
Flash meter	For function checks

4-4. Jigs Used

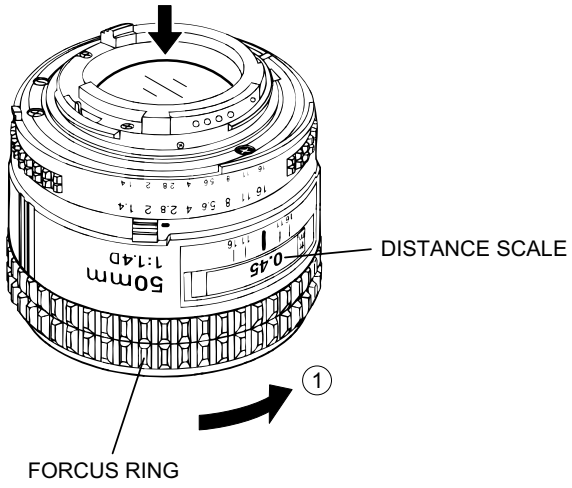
Productname / type name	Pats.No	Use	Remarks
FilterLB140	ZJ00006-100	Camera System adjustments	Common with the DS-30/DS-20/DS-7
AF solid chart	ZJ00553-100	AF adjustment	Only FinePix S2 Pro
AF Adjustment Lens	J18266	AF adjustment	Only FinePix S2 Pro
Gray Chart(Reflective type)	ZJ00254-100	Flash adjustmen	Common with the MX700/MX500
CCD defect data	**ZJ00556-100**	**CCD defect data**	**Only FinePix S2 Pro**
USB cable	FZ04205-100	System adjustment	
IEEE1394 cable	FZ04797-100	AF adjustment	
Hyper Utility Software HS-S2	ZJ00555-100	AF adjustment	Only FinePix S2 Pro
Lens for inspection	ZJ00396-100	Inspection	
Lens for adjustment	----------	Image sensor Adjustment	
Power cable jig	ZJ00213-100	General Adjustment	Common with the FinePix6800Z
FinePix S2 Pro PC adjustment soft	**ZJ00558-100**	**For PC adjustment**	**Only FinePix S2 Pro**
Standard Drive(microdrive)	ZJ00397-100	Inspection	FinePix S1 Pro and commonness
DSC jig driver setup	**ZJ00476-100**	**For PC setup**	
Resolution Chart for High-Definition	ZJ00398-100	For Definition inspection	FinePix S1 Pro and commonness

* Download Jig of the bold-faced type from the server.

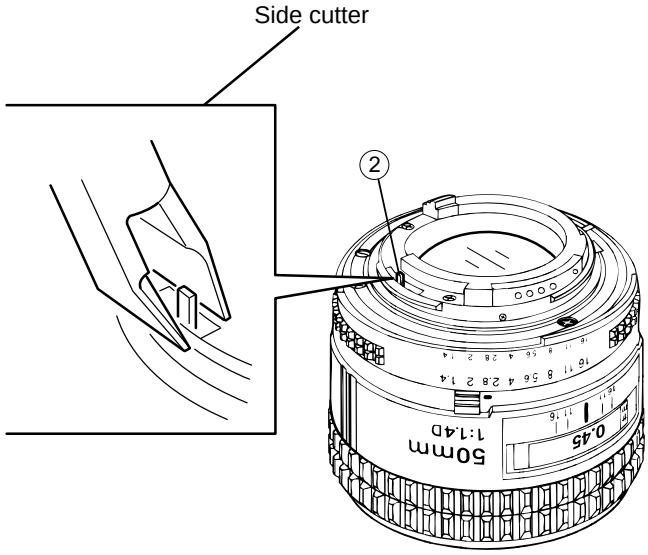
[Modification of an Inspection Lens to an Adjustment Lens]
[It is common with FinePix S1 Pro.]

* If an inspection interchangeable lens is used as is, the aperture will change automatically, so there will be no convergence [ISO sensitivity adjustment] and it could result in an error.
Therefore,
(1)The CPU signal contact unit inside the lens must be removed
(2)The protrusion for mounting on the camera must be removed
from the inspection interchangeable lens to prevent it from switching its aperture automatically, and thus modify the lens so it can be used for adjustment.
The modification procedure is shown below.

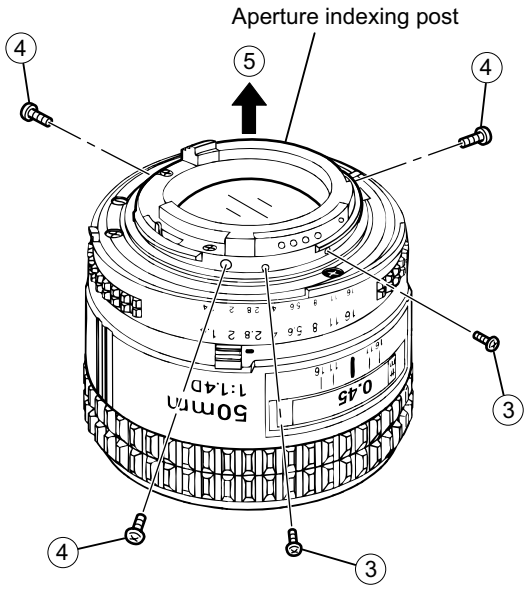
[Step 1]
Turn the focus ring (1) so that the interchangeable lens's distance scale reads 0.45, then place the lens upside down.



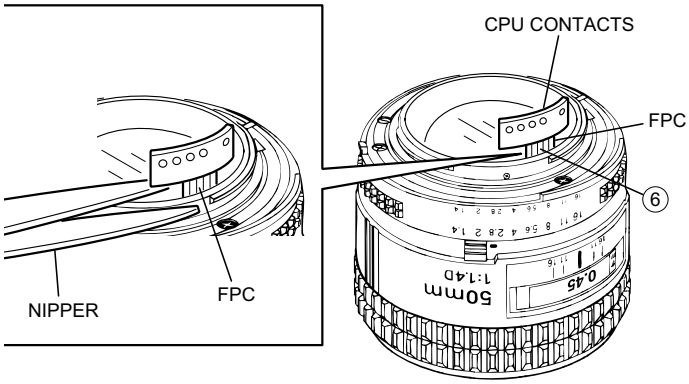
[Step 2]
Cut the stopper for the camera using side cutters, etc.



[Step 3]
Remove the screws holding the opening F value linkage guide in the order shown by the circled numbers in the figure below, then remove the opening F value linkage guide. (5)

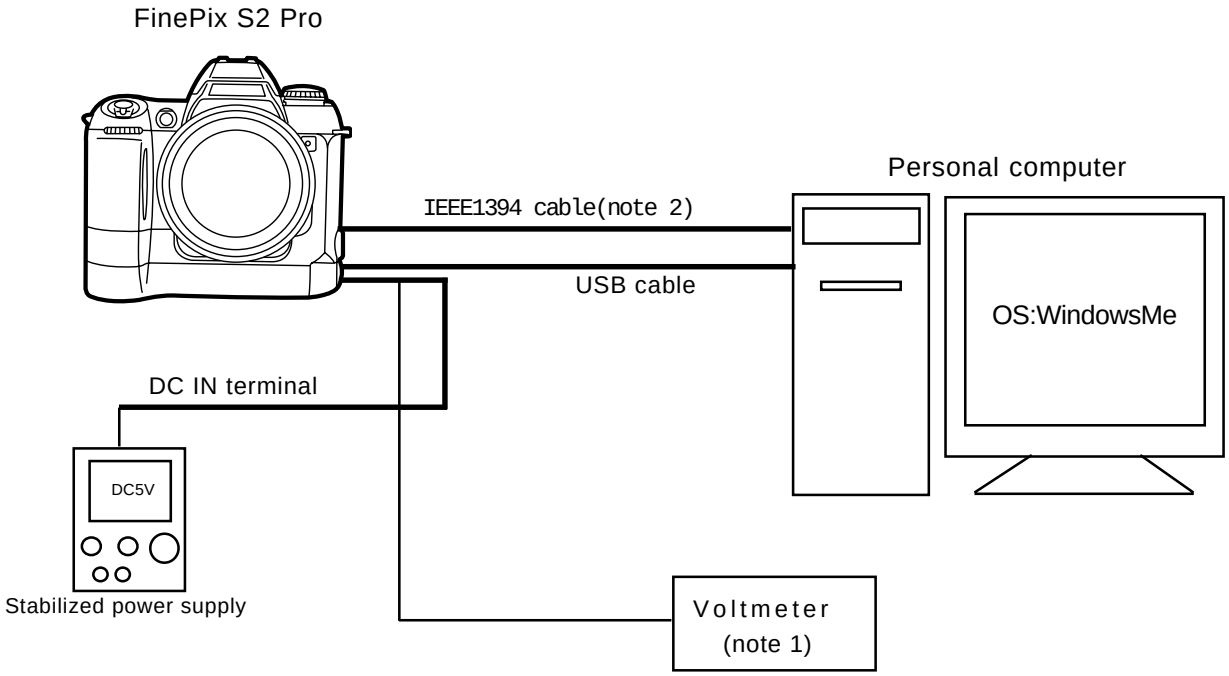


[Step 4]
Cut off the FPC of the CPU signal contacts with scissors, etc.



[Step 5]
Fasten the opening F value linkage guide with the mounting screws.

4-5. Jig Connections



note 1: Always measure input voltage in the vicinity of the DC IN terminal when making adjustments.
note 2: Connect only at the AF adjustment.

4-6. Environment Settings

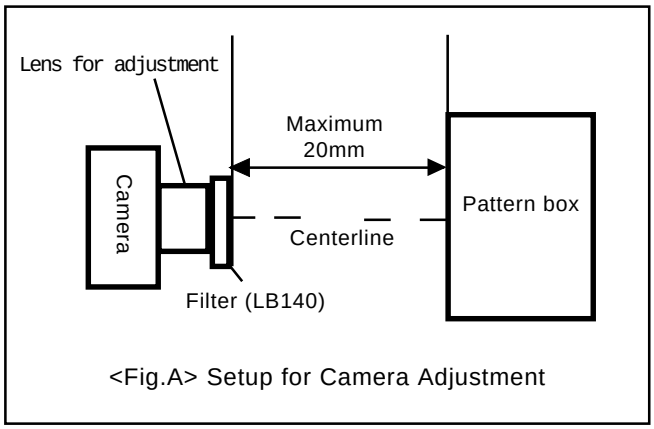
(1) Environment settings for CAM adjustment (fig. A)
<< All white pattern >>
Set the distance between the camera reference plane (*1) and the pattern box to 20 mm or less.
Mount a filter (LB140) in the reference plane.

1. Color temperature: 6100+-50K (with LB140 filter)
Measurement position - Center of pattern box
Measurement instrument - Minolta Color Meter IIIF or equivalent

* Color temperature measurement method
Stick a filter (LB140) to the pattern box.
With the filter (LB140) and color temperature meter in place, adjust the pattern box color temperature to 6100+-50K.

2. Brightness: 160+-5 cd/m2 (with LB140 filter)
Measurement position - Center of pattern box
Measurement instrument - Minolta brightness meter LS-110 or equivalent

* Brightness measurement method
Stick a filter (LB140) to the pattern box.
With the filter (LB140) and brightness meter in place, adjust the pattern box brightness to 160+-5 cd/m2.



<Fig.A> Setup for Camera Adjustment

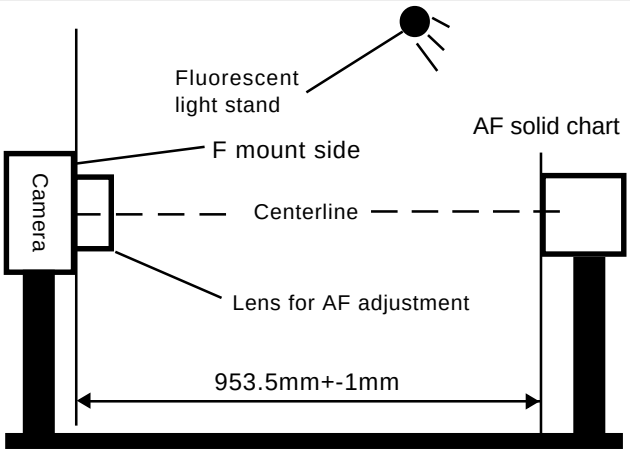
*1 Use front of LENS as camera reference surface.

(2)Environment settings for AF adjustment (fig. B)

1) Set the distance between the AF chart and the front of the F mount to 953.5 mm +-1 mm.

2) Use a light source to illuminate the AF chart. Set the AF chart surface brightness as 9.0 to 11.5 Ev.

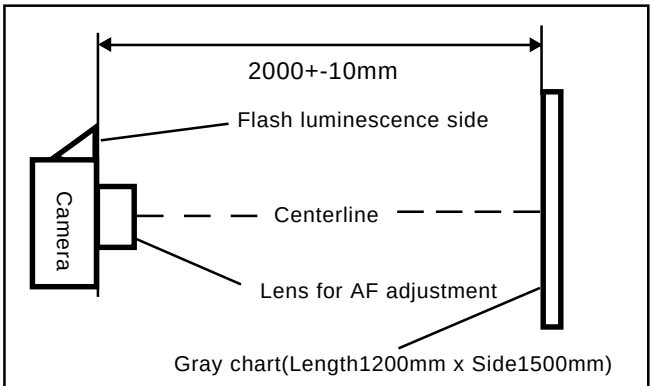
3) Set the camera on the stand for the AF solid chart.



<Fig.B> Setup for AF Adjustment

(3)Environment settings for flash adjustment (fig. C)

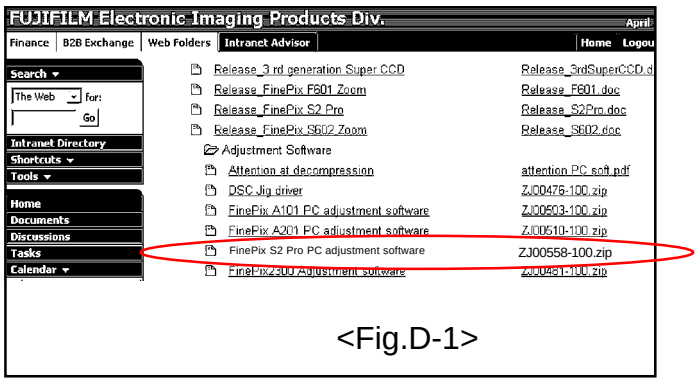
Because flash adjustments are easily affected by outside light, the periphery of the gray chart should be made extremely dark to minimize interference from outside lighting. Install the chart 2000 mm from the front of the flash unit.
As the gray chart standard, use Superior Oxford Gray (No.22) and a reflectivity of 18+-0.7%.



<Fig.C> Setup for Flash Adjustment

4-7.Various downloading software decompressions, preservation methods, and notes

The PC adjustment software are in a specified Web server, and both of these are the compression of ZIP form files.
Therefore, after downloading these compression files from the Web server, the decompression of the file is necessary.
In the decompression software, if the decompression of the ZIP form can be done, any software is OK.
(Please prepare each one for the decompression software.)
The decompression and the preservation method of the PC adjustment software and the firmware are described to the following.



<Fig.D-1>

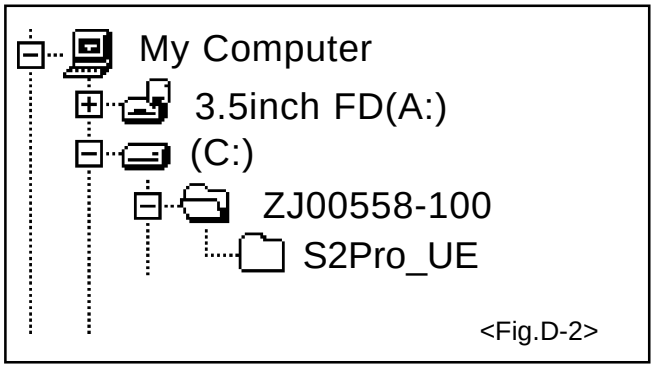
(1) The PC adjustment soft decompression and preservation method

<Step1>
Download compressed PC adjustment software (ZJ00558-100.ZIP) from Web server (http://fujifilm-di.intranets.com/).<Fig.D-1>

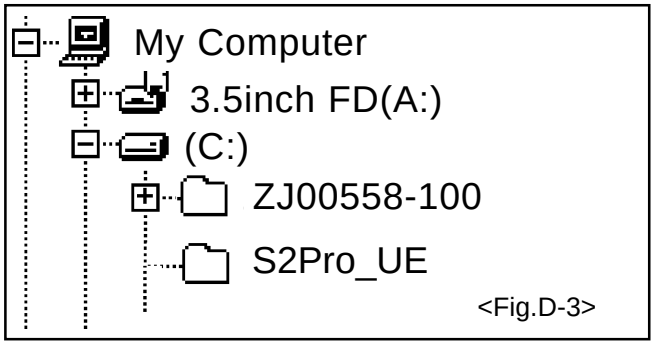
<Step2>
Defrost the downloaded compression software.

(Note)
*Specify the preservation drive for C drive if it is decompression software which can specify the preservation drive.
*Similarly, defrost without making a new folder if it is decompression software which can be defrosted without making a new folder.
*Defrost simply if the decompression software which you have cannot specify the drive specification and the folder making.

<Step3>
The folder named ZJ00558-100 can be made by defrosting without specifying anything. <Fig.D-2>
Then, copy the folder named S2Pro_UE in this folder in C drive.(Fig.D-3)
The folder of ZJ00558-100 becomes unnecessary at the end, and delete this folder.



<Fig.D-2>



<Fig.D-3>

(Caution)[Important]
(a) PC adjustment software can not start when there is folder of S2Pro_UE in folder named ZJ00558-100.(Fig.D-2)
Please preserve the folder of S2Pro_UE right under C drive.(Fig.D-3)
(b) Please do not change the foldername named S2Pro_UE.
PC adjustment software can not start when foldername is changed.

4-8.Install the DSC jig driver and the PC adjustment software.

* Since this camera uses the USB for communications with the personal computer, in order to start the PC adjustment software, [the DSC jig driver] needs to be installed in the personal computer beforehand.
* The DSC jig driver is the same as that for the FinePix 6800Z, so if this jig driver software is already installed in the personal computer, it is not necessary to install it.

The procedure is given below.

(1)Installation of DSC jig driver

<Step 1>
DSC jig driver(ZJ00476-100.ZIP) is downloaded from Web server (http://fujifilm-di.intranets.com/).

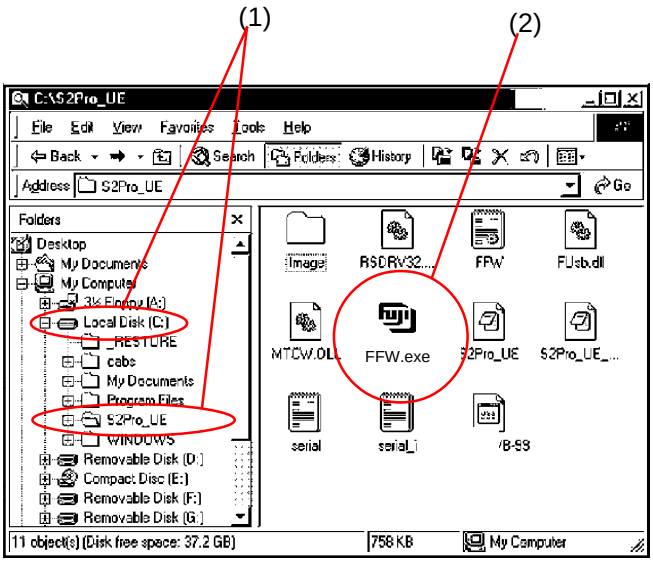
<Step 2>
Defrost the downloaded compression software

<Step 3>
Double-click setup.exe in the folder of defrosted ZJ00476-100 and install Fuji FILM DSC Jig Driver as follows.

<Step 4>
Install the software in [C:\ProgramFiles\Fjig]
according to the instructions on the PC's screen.

(2)Startup of PC adjustment software

When the folder has been copied to the C drive, double-click on the file C:\S2Pro_UE\ffw.exe (Fig.D-5(1)) to start the adjustment software.



<Fig.D-5> Windows Explorer screen of FFW.exe

4-9.Adjustment Software Initial Setup

* As the initial setup has already been written to the [FFW.ini] file, all that is required is to follow the procedure below. Note that changing the file name may prevent the software running.
* As steps 3, 4, 5, and 6 of initial setup are incorporated in the [FFW.ini] file, confirmation is the only action required.
* Do not change the content of the program S2Pro_UE.ff under any circumstances. Any changes will prevent the software running.

<Step 1>

Double-click on the adjustment software executable file [FFW.exe] (Fig.D-(2)) to display the [FFW Start-up Screen] (Fig.E).

<Step 2>

Select [Mode Settings] (Fig.F-(2)) from the [Setting] menu (Fig.F-(1)) on the [MENU Screen].

<Step 3>

Select the [EVR & Communications] menu on the [Customize] dialog screen (Fig.G-(1)).

Setup as follows on the [EVR] menu (Fig.G-(2)).

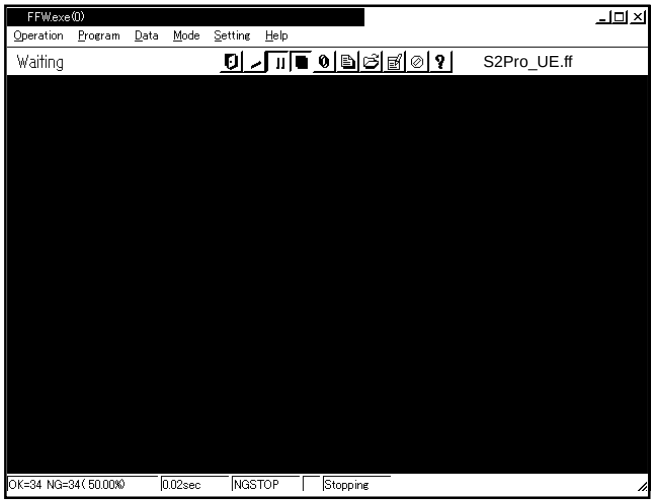
Item	Setup details
etc (-V2)	Use (=check)
LANC page	Use (=check)

<Step 4>

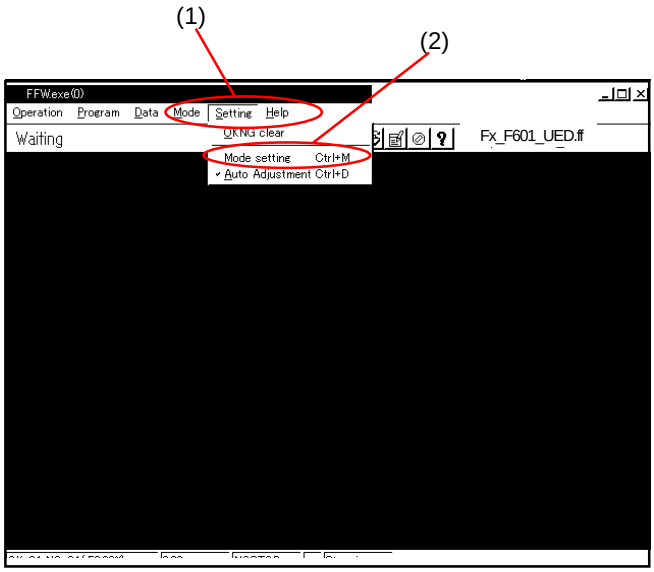
Select the [Etc] menu on the [Customize] dialog screen (Fig.H-(1)).

Setup as follows on the [Etc] menu (Fig.H-(2)).

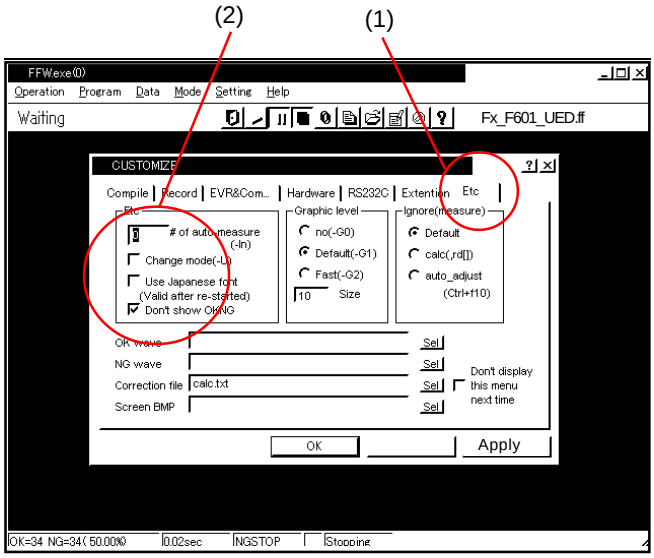
Item	Setup details
Auto-measure	0
Change mode	Do not check (=not used)
Use Japanese font	Do not check (=not used)



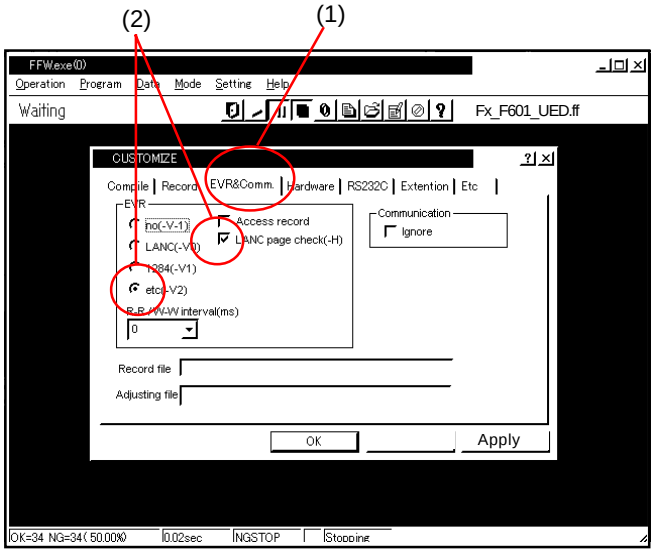
<Fig.E> FFW Start-up Screen



<Fig.F> Mode Setting Display Select Screen



<Fig.H> Etc Customize Dialog Box Screen



<Fig.G> EVR Dialog Box Screen

<Step 5>

Select [Hardware] on the [Customize] setup screen (Fig.I-(1)).

Setup as follows on the [Hardware] menu (Fig.I-(2)).

Item	Setup details
Debug Mode	Select [Ignore Focus].

<Step 6>

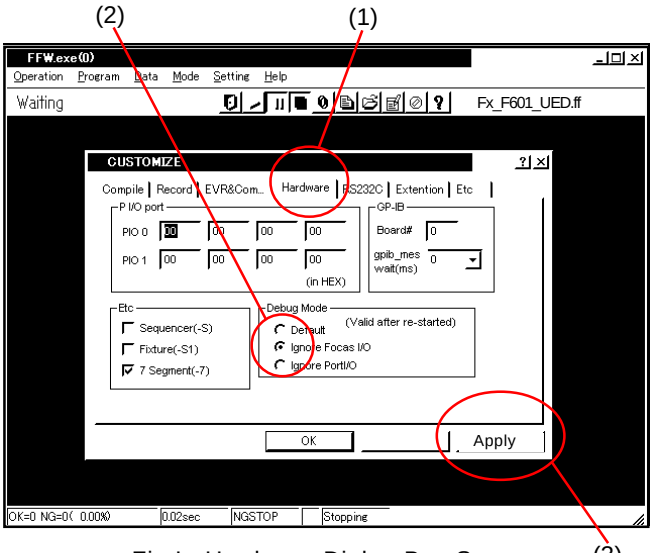
When the settings have been entered in the [EVR], [Other], and [Hardware] menus noted above, click on [Apply] on the [Customize Dialog] screen (Fig.I-(3)) to terminate. Further setup is unnecessary once the settings have been applied.

(note) Setting [Don't show OK/NG] to OFF will allow [OK] to be displayed on the computer screen if the adjustment is successful, and [NG] to be displayed if it is not (either setting can be used).

Cautions for Adjustment

(note 1) The end setting returns the camera to the [Product Mode] from the [Jig Mode]. Always ensure that the camera is returned to the [Product Mode] before use after using the computer adjustment software. Unless this termination setting is selected, [Mass Storage] will not be recognized when the camera and computer are connected, and communication with the computer will be impossible.

(note 2) FinePix S2 Pro may be used with other digital cameras, however data read and write is not possible. It is possible to read data from other models, however this should not be attempted under any circumstances. See Table 1 at right.



<Fig.I> Hardware Dialog Box Screen

Menu	Command	Description
Operation	Start	Program start
	Stop	Program stop
	Temporary stop	Temporary program stop
	Step 0	Do not use.
	Terminate	Terminate program.
Program	Reload	Reload program (*.ff).
	Select	Select program (*.ff).
	Edit	Edit program (*.ff).
Data	ad[ ]	Do not use.
	rd [ ]	Do not use.
	SW	Do not use.
	fsw	Do not use.
	EVR	Do not use (Note 2).
Mode	Record file	Do not use.
	NGSTOP	Temporarily stops program when adjustment is unsuccessful.
	STEP	Do not use.
	LINE	Do not use.
	AUTO	Do not use.
Setting	OK/NG clear	Do not use.
	Mode set	Sets mode.
	Automatic adjustment	Runs 'Auto Adjust' inside the user program.
Help	Help	Basic software help
	FF help	User program help
	FOCAS	Not used with this adjustment software.
	Version	Version information for basic software.

<Table 1> FFW.exe Commands

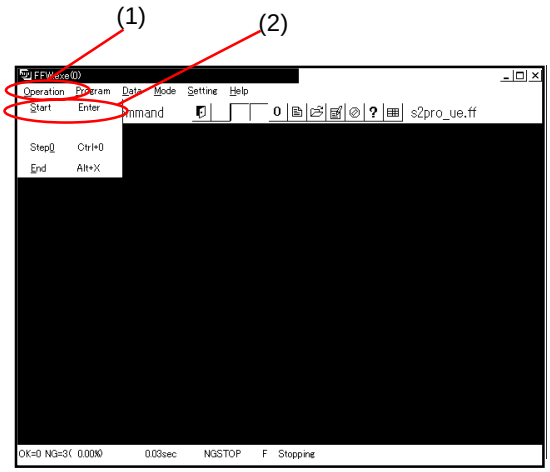
* Do not change the content of the program S2Pro_UE.ff under any circumstances. Any changes will prevent the software running.

4-10. Starting the Adjustment Software

<Step 1>
Double-click the executable file in the adjustment software (FFW.exe).

-> The **[FFW.EXE Startup (fig. 1)]** window appears.

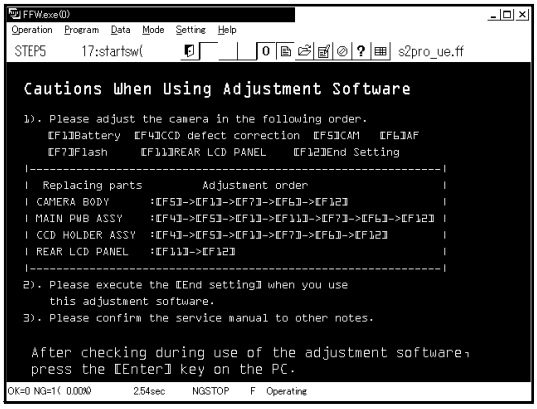
<Step 2>
Run [Operation] -> [Start]. (Fig. 1-(1)) -> (Fig. 1-(2))
---> The **[Cautions When Using Adjustment Software (Fig.2)]** is displayed.



<Fig.1> FFW.EXE Start-up Screen

<Step 3>
Confirm that you have read the usage notes and then press the [Enter] key on your computer.

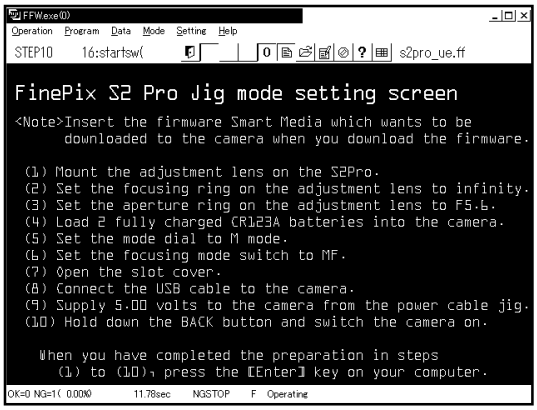
--> The **[FinePix S2 Pro Jig Mode Setup Screen(Fig.3)]** is displayed.


FFW.exe(0)
Operation Program Data Mode Setting Help
STEP5 17:startsw(
s2pro_ue.ff
Cautions When Using Adjustment Software
1). Please adjust the camera in the following order.
[F1]Battery [F4]CCD defect correction [F5]CAM [F6]AF
[F7]Flash [F11]REAR LCD PANEL [F12]End Setting
Replacing parts Adjustment order
CAMERA BODY :[F5]->[F1]->[F7]->[F6]->[F12]
MAIN PWB ASSY :[F4]->[F5]->[F1]->[F11]->[F7]->[F6]->[F12]
CCD HOLDER ASSY :[F4]->[F5]->[F1]->[F7]->[F6]->[F12]
REAR LCD PANEL :[F11]->[F12]
2). Please execute the [End setting] when you use this adjustment software.
3). Please confirm the service manual to other notes.
After checking during use of the adjustment software, press the [Enter] key on the PC.

<Fig.2>Cautions When Using Adjustment Software

<Step 4>
After setting the camera in the jig mode,
press the [Enter] key on the computer.
* Setting the Jig mode
(1) Mount the adjustment lens on the S2Pro.
(2) Set the focusing ring on the adjustment lens to infinity.
(3) Set the aperture ring on the adjustment lens to F5.6.
(4) Load 2 fully charged CR123A batteries into the camera.
(5) Set the mode dial to M mode.
(6) Set the focusing mode switch to MF.
(7) Open the slot cover.
(8) Connect the USB cable to the camera.
(9) Supply 5.00 volts to the camera from the Power cable jig.
(10) Hold down the BACK button and switch the camera on.
(11) When you have completed the preparation in steps

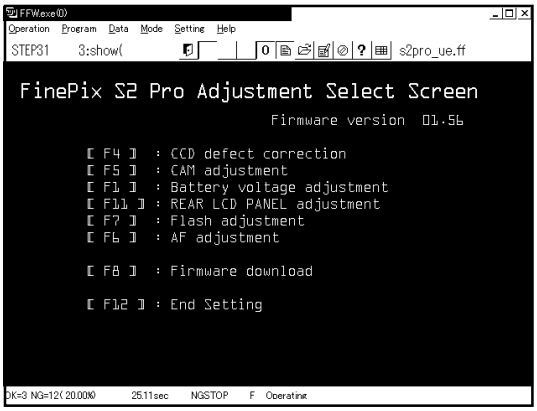
(1) to (10), press the [Enter] key on your computer.


FFW.exe(0)
Operation Program Data Mode Setting Help
STEP10 16:startsw(
s2pro_ue.ff
FinePix S2 Pro Jig mode setting screen
<Note>Insert the firmware Smart Media which wants to be downloaded to the camera when you download the firmware.
(1) Mount the adjustment lens on the S2Pro.
(2) Set the focusing ring on the adjustment lens to infinity.
(3) Set the aperture ring on the adjustment lens to F5.6.
(4) Load 2 fully charged CR123A batteries into the camera.
(5) Set the mode dial to M mode.
(6) Set the focusing mode switch to MF.
(7) Open the slot cover.
(8) Connect the USB cable to the camera.
(9) Supply 5.00 volts to the camera from the power cable jig.
(10) Hold down the BACK button and switch the camera on.
When you have completed the preparation in steps (1) to (10), press the [Enter] key on your computer.

<Fig.3> FinePix S2 Pro Jig Mode Setup Screen

<Step 4>
Set the camera to Jig mode and then press the [Enter] key on your computer.
--> The **[Adjustment Select Screen(Fig.4)]** is displayed.

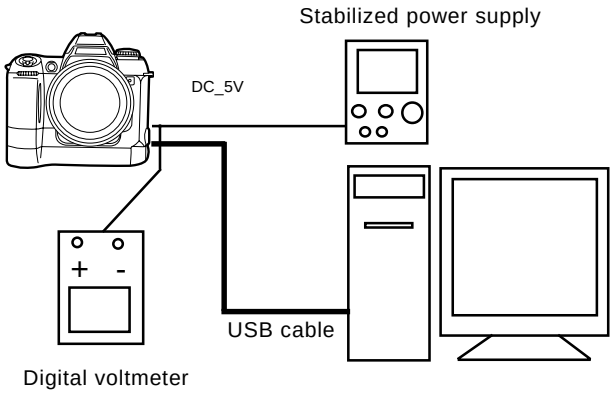
Adjustment	Selection
CCD defect correction adjustment	Press the [F4] key on the computer.
CAM adjustment	Press the [F5] key on the computer.
Battery voltage adjustmen	Press the [F1] key on the computer.
REAR LCD PANEL adjustment	Press the [F11] key on the computer.
Flash adjustment	Press the [F7] key on the computer.
AF adjustment	Press the [F6] key on the computer.
Firmware download	Press the [F8] key on the computer.
End Setting	Press the [F12] key on the computer.


FFW.exe(0)
Operation Program Data Mode Setting Help
STEP31 3:show(
s2pro_ue.ff
FinePix S2 Pro Adjustment Select Screen
Firmware version 01.56
[F4] : CCD defect correction
[F5] : CAM adjustment
[F1] : Battery voltage adjustment
[F11] : REAR LCD PANEL adjustment
[F7] : Flash adjustment
[F6] : AF adjustment
[F8] : Firmware download
[F12] : End Setting

<Fig.4> Adjustment Select Screen

4-11.[F4]: CCD Defect Correction Adjustment

<<IMPORTANT>>
To perform CCD defect correction, the defect data for the camera being adjusted is required.
The repair work involved in CCD defect correction must be performed as part of CCD HOLDER ASSY or MAIN PWB ASSY replacement. The methods for obtaining the defect data used in the respective repair work differ. Refer to the information below before making the adjustments.
[Obtaining CCD defect data]
1. When replacing the CCD HOLDER ASSY
Use the CCD defect data on the floppy disk supplied with the replacement CCD HOLDER ASSY for the adjustments.
2. When replacing the MAIN PWB ASSY
Make a note of the CCD serial number on the camera being adjusted and copy the CCD defect data that matches that serial number from the CCD defect data file onto a floppy disk. Refer to the CCD defect data creation method given on the next page for more information on the procedure for creating the floppy disk.
[Note]
Prepare the defect data floppy disk before starting the CCD defect correction adjustments.

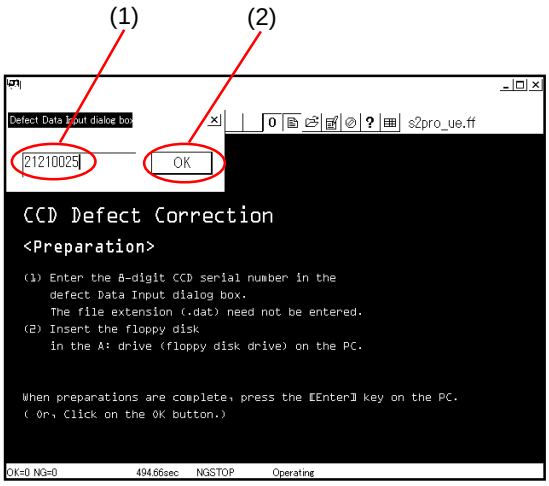


Connections for CCD Defect Correction Adjustment

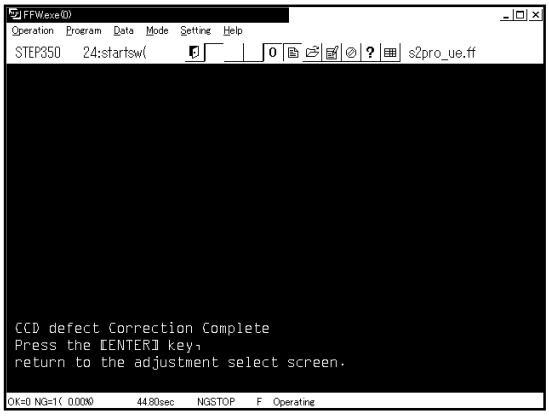
<Step 1>
Select **[F4]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F4] key on the computer).
-->The **[CCD Defect Correction Start Screen (Fig.5)]** is displayed.
<Step 2>
Follow the instructions on the [CCD Defect Correction Start Screen (Fig.5)], and make the following prepa rations.
(1) Prepare the CCD defect data floppy disk for the camera being adjusted.
(2) Enter the 8-digit CCD serial number (figure 5-(1)) in the defect data input dialog box. There is no need to enter the extension (.dat or .kiz).
(3) Insert the floppy disk into the A: drive (floppy disk drive) of your computer.
When you have completed the preparations,
press the [Enter] key on your computer.
Click the [OK] button (figure 5-(2)).
--> CCD defect correction adjustment begins.
--> When the adjustments are successfully completed, the adjustment data is written to the flash ROM.
--> When the adjustment data has been successfully written to the flash ROM, the **[CCD Defect Correction Complete Screen (Fig.6)]** is displayed.
<Step 3>
Press the [Enter] key on the computer while in the [CCD Defect Correction Complete Screen (Fig.6)].

---> The **[Adjustment Select Screen (Fig.4)]** is displayed.

[Note]
If you perform CCD defect correction adjustment, you must also perform the CAM adjustment -> flash adjustment -> AF adjustment sequence.


(1)
(2)
Defect Data Input dialog box
21210025
OK
s2pro_ue.ff
CCD Defect Correction
<Preparation>
(1) Enter the 8-digit CCD serial number in the defect Data Input dialog box. The file extension (.dat) need not be entered.
(2) Insert the floppy disk in the A: drive (floppy disk drive) on the PC.
When preparations are complete, press the [Enter] key on the PC. (Or, Click on the OK button.)
OK=0 NG=0
494.66sec
NGSTOP
Operating

<Fig.5> CCD Defect Correction Start Screen



<Fig.6> CCD Defect Correction Complete Screen

[The procedure for creating a CCD defect data file to be used in MAIN PWB ASSY replacement is described below.]

* In this explanation, the sample serial number shown in the figure at right is used as an example.

<Step 1>

When you are replacing the MAIN PWB ASSY, make a note of the CCD serial number printed on the CCD HOLDER ASSY. In figure 7, this number is shown as the upper 7-digit number (0148400) and the lower 4-digit number (0750). In this case, the defect data file name is read as "14840750".

In other words, the first digit and the last 2 digits in the upper number are discarded and only the 4 numbers from digit 2 to digit 5 are used.

The lower 4-digit number is then added to the end of these 4 digits and the combined 8-digit number is used as the CCD defect data file name. Make a note of this number.

[Notes]

1.The S2Pro uses 2 types of defect data file.

The file extensions used for CCD defect data are ".dat" and ".kiz". Windows may be set to hide file extensions. If so, change the Windows settings so that file extensions are displayed.

2.Letters as well as numbers may be used in CCD serial numbers. If so, use the same method as that described above to obtain the file name.

3.Be sure to note the CCD serial number correctly. If a file with the wrong file name is used for defect correction, the data for a different camera will be written to the file.

<Step 2>

Download the ZIP file of top four digits from Web server (http://fujifilm-di.intranets.com/).

Open **[ZJ00556-100(Fig 8-(1))]** in the CCD defect data folder, and download **"1484.zip[Fig.8-(2)]"**.

<Step 3> **[Copying a .dat file][Copying a .kiz file]**

Decompress "1484.zip".

-->"1484 folders" including **"14840750.dat and 14840750.kiz"** is made.

<Step 4>

Insert a writable floppy disk into the floppy disk drive on the computer.

<Step 5>

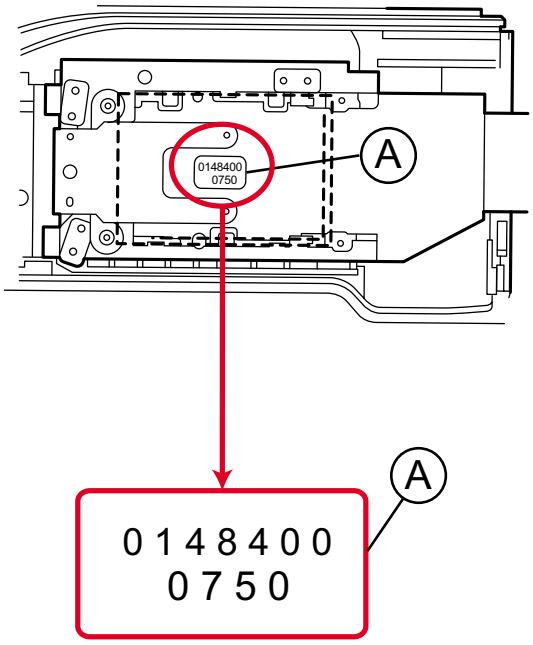
Open in "1484 folders", search for **"14840750.dat and 14840750.kiz [Fig 8-(3)] "**, and copy it onto the floppy disk.

(note)

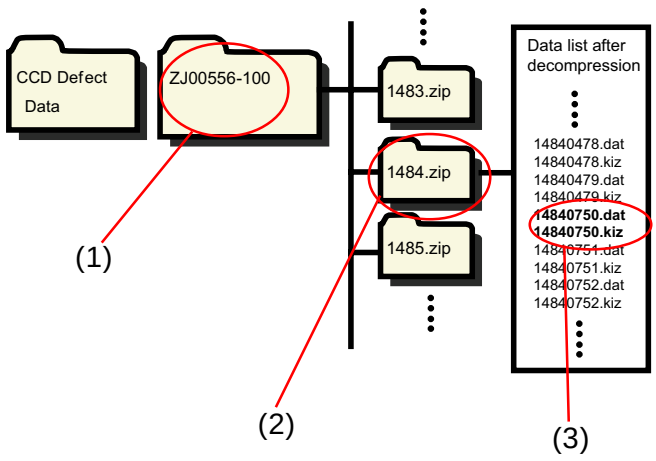
2. The file identifier for the CCD defect data is ".dat and .kiz". With some Windows settings, the identifier is not displayed. Change the setting in such cases.
3. In some cases the CCD serial number includes letters as well as numbers. In such cases the file name is formed in exactly the same way.
4. Do not create a folder on the floppy disk when copying the file.
5. The defect data file may be used after copying to the C: drive on the computer, however it should be labeled clearly to ensure that it is recognizable as FinePix S2Pro CCD-defecte data, and kept in a safe place.

<Step 6>

Using the defect data in the floppy disk prepared in Step 5, perform CCD defect correction adjustment.



< Fig. 7> Method read by S/No of Defect data



(http://fujifilm-di.intranets.com/).

< Fig. 8> Defect data making procedure chart

4-12.[F5]: CAM Adjustment

(Shutter adjustment, aperture sensitivity decline adjustment, ISO sensitivity adjustment, white balance adjustment, AE glare stop adjustment, offset level adjustment)

[Preparation]

For CAM adjustment, first have an LB 140 filter and pattern box (all white) ready.

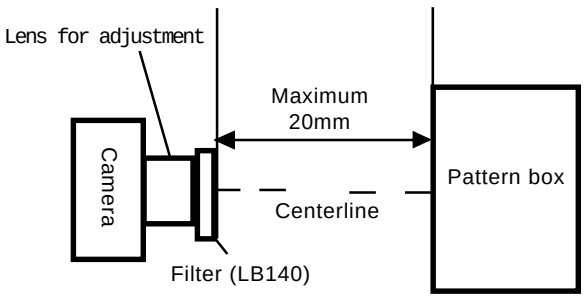
Use the adjustment lens to perform CAM adjustment. Set the adjustment lens aperture to F5.6 and the focal distance to infinity.

[Setup for Camera Adjustment]

Refer to the "Setup for Camera Adjustment" figure shown at right.

[Note]

CAM adjustment cannot be successfully completed if the pattern box color temperature or brightness is outside the standard range. Before performing CAM adjustment, always check and adjust the pattern box.



Setup for Camera Adjustment

<Step 1>

Select **[F5]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F5] key on the computer).

---> The **[CAM Adjustment Preparation Screen (Fig.9)]** is displayed.

<Step 2>

Follow the instructions on the [CAM Adjustment Preparation Screen (Fig.9], and make the following preparations.

(1) Have an LB 140 filter handy.

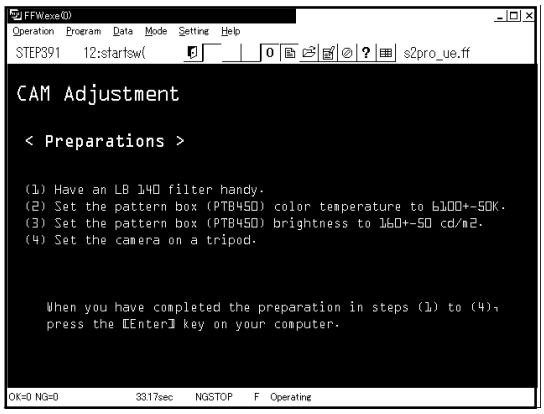
(2) Set the pattern box (PTB450) color temperature to 6100+-50K. (See "4-6 Environment Settings" for the adjustment procedure.)

(3) Set the pattern box (PTB450) brightness to 160+-50 cd/m2. (See "4-6 Environment Settings" for the adjustment procedure.)

(4) Set the camera on a tripod.

When you have completed the preparations, press the [Enter] key on your computer.

---> The **[CAM Adjustment (with filter) Screen (Fig.10)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP391 12:startsw(
s2pro_ue.ff
CAM Adjustment
< Preparations >
(1) Have an LB 140 filter handy.
(2) Set the pattern box (PTB450) color temperature to 6100+-50K.
(3) Set the pattern box (PTB450) brightness to 160+-50 cd/m2.
(4) Set the camera on a tripod.
When you have completed the preparation in steps (1) to (4),
press the [Enter] key on your computer.
OK=0 NG=0
33.17sec
NGSTOP
F Operating

<Fig.9> CAM Adjustment Preparation Screen

<Step 3>

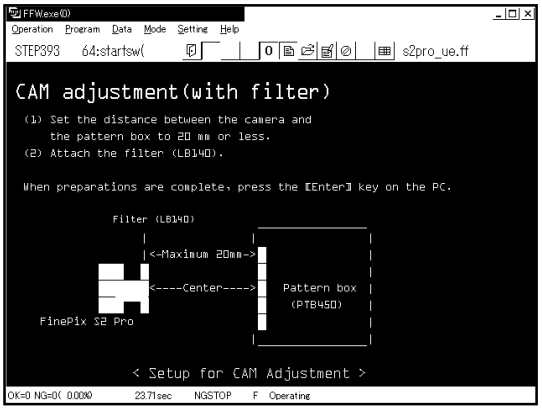
Follow the instructions on the [CAM Adjustment (with filter) Screen (Fig.10)], and make the following preparations.

(1) Set the distance between the camera and the pattern box to 20 mm or less.

(2) Attach the filter (LB140).

When you have completed the preparations, press the [Enter] key on your computer.

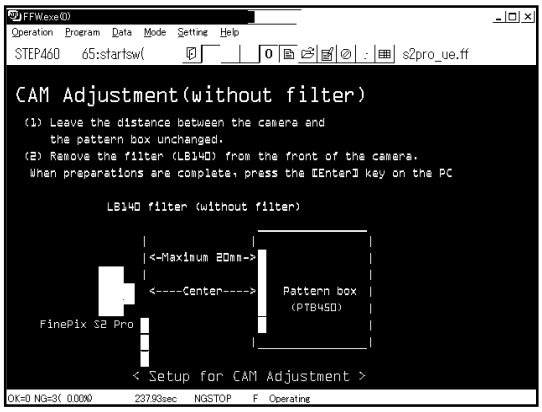
--> CAM adjustment (with filter) begins.



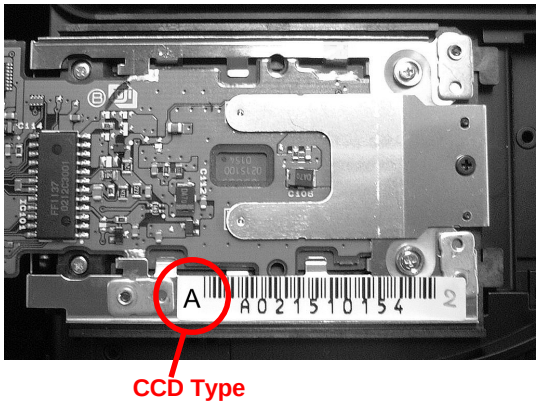
<Fig.10> CAM Adjustment (with filter) Screen

<Step 4>
When CAM adjustment (with filter) is completed normally, **[CAM Adjustment (without filter) Screen (Fig.11)]** is displayed. Make the following preparations.
(1) Remove the LB 140 filter from the camera.
(2) Set the distance between the camera and the pattern box to 20 mm or less.
When you have completed the preparations, press the [Enter] key on your computer.

--> CAM adjustment (without filter) begins.
-->The **[CCD Type Selection Screen(Fig.11-1)]** is displayed.

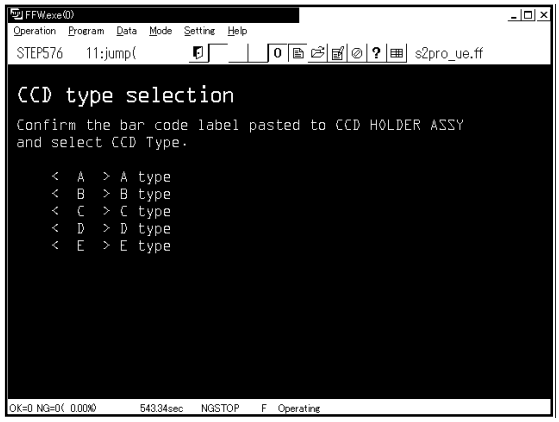

FFWexe(0)
Operation Program Data Mode Setting Help
STEP460 65:startsw(s2pro_ue.ff
CAM Adjustment(without filter)
(1) Leave the distance between the camera and the pattern box unchanged.
(2) Remove the filter (LB140) from the front of the camera.
When preparations are complete, press the [Enter] key on the PC
LB140 filter (without filter)
<-Maximum 20mm->
<----Center---->
Pattern box
(PTB450)
FinePix S2 Pro
< Setup for CAM Adjustment >
OK=0 NG=3(0.00%) 237.93sec NGSTOP F Operating
<Fig.11> CAM Adjustment (without filter) Screen

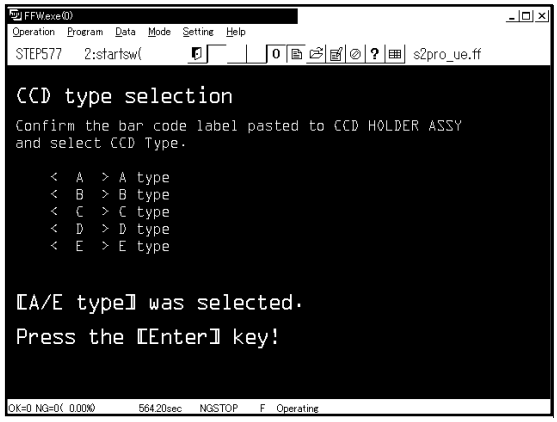
☆ <Step 5>
Follow the instructions on the [CCD Type Selection (Fig.11-1)], and make the following preparations.
(Note)
Select "A Type" when there is no mark of A to E.



* Here, assume that "A" was selected as an example.
-->The [A/E CCD Type selection screen (Fig.11-2)] is displayed.

☆ <Step 6>
[A/E CCD Type selection screen (Fig.11-2)] is displayed.
Press the [Enter] key on the computer.

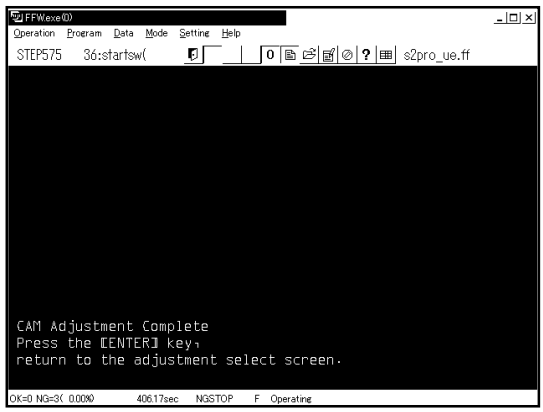
☆

FFWexe(0)
Operation Program Data Mode Setting Help
STEP576 11:jump(s2pro_ue.ff
CCD type selection
Confirm the bar code label pasted to CCD HOLDER ASSY and select CCD Type.
< A > A type
< B > B type
< C > C type
< D > D type
< E > E type
OK=0 NG=0(0.00%) 543.34sec NGSTOP F Operating
<Fig.11-1> CCD Type Selection Screen

☆

FFWexe(0)
Operation Program Data Mode Setting Help
STEP577 2:startsw(s2pro_ue.ff
CCD type selection
Confirm the bar code label pasted to CCD HOLDER ASSY and select CCD Type.
< A > A type
< B > B type
< C > C type
< D > D type
< E > E type
[A/E type] was selected.
Press the [Enter] key!
OK=0 NG=0(0.00%) 564.20sec NGSTOP F Operating
<Fig.11-2> A/E CCD Type selection screen

<Step 7>
When adjusted data is saved normally,
[CAM Adjustment Complete Screen (Fig.12)] is displayed.
Press the [Enter] key on the computer.

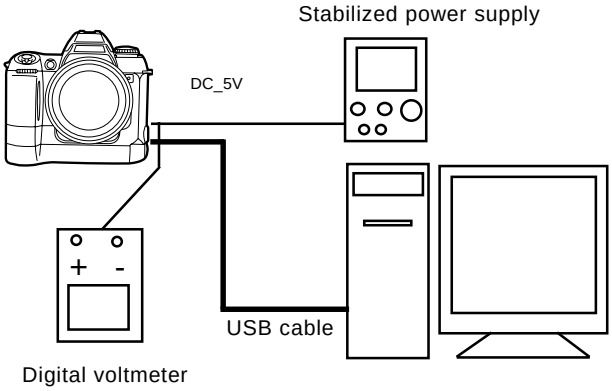
---> The **[Adjustment Select Screen (Fig.4)]** is displayed.
Select and make any further adjustments from the screen.

[Note]
If you perform CAM adjustment, you must also perform the flash adjustment -> AF adjustment sequence.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP575 36:startsw(s2pro_ue.ff
CAM Adjustment Complete
Press the [ENTER] key,
return to the adjustment select screen.
OK=0 NG=3(0.00%) 406.17sec NGSTOP F Operating
<Fig.12> CAM Adjustment Complete Screen

4-13. [F1]: Battery Voltage Adjustment

[Notes]
1) When performing battery voltage adjustment, provide a power supply (5 V) to the camera from the specified power cable jig before setting the camera to Jig mode.
2) Always measure the input voltage close to the DC-IN terminal.
3) When decreasing the voltage, take care to avoid excessive decreases and maintain a stable power supply during the adjustments. If the voltage drops too low, it can cause interruptions in communications between the adjustment software and the camera and lead to errors in the adjustment software. If this occurs, restart the adjustment software.

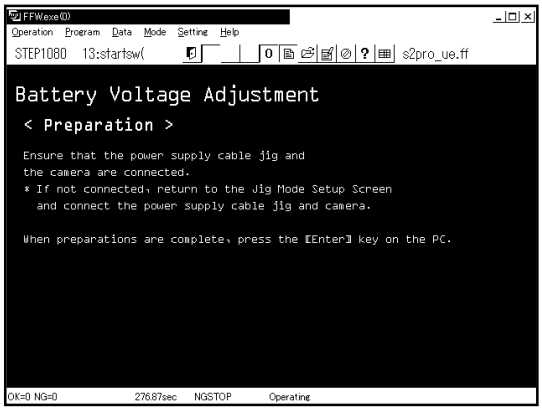


Setup for Battery Adjustment

<Step 1>
Select **[F1]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F1] key on the computer).
---> The **[Battery Voltage Adjustment Preparation Screen (Fig.13)]** is displayed.

<Step 2>
Follow the instructions on the [Battery Voltage Adjustment Preparation Screen (Fig.13)], and make the following preparations.
(1) Check that the power cable jig is connected to the camera.
* If the camera and jig are not connected, return to the Jig mode setup window and connect the camera to the power cable jig.
When you have completed the preparations, press the [Enter] key on your computer.

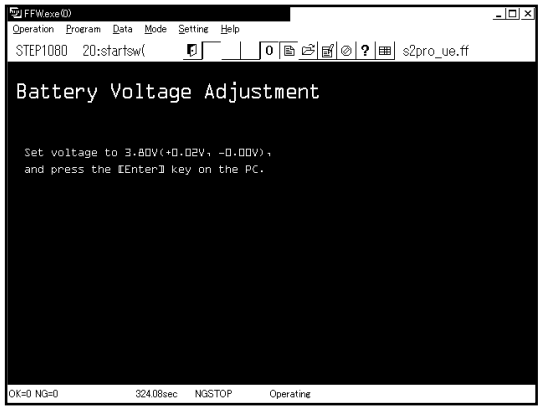
-->The **[3.80V Input Screen (Fig.14)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP1080 13:startsw(s2pro_ue.ff
Battery Voltage Adjustment
< Preparation >
Ensure that the power supply cable jig and the camera are connected.
* If not connected, return to the Jig Mode Setup Screen and connect the power supply cable jig and camera.
When preparations are complete, press the [Enter] key on the PC.
OK=0 NG=0 276.87sec NGSTOP Operating

<Fig.13> Battery Adjustment Complete Screen

<Step 3>
Follow instructions on the [3.80V Input Screen (Fig.14)], and adjust BATT_PRE voltage. Set voltage to **3.80V(+0.02V, -0.00V)**, press the [Enter] key on the computer.

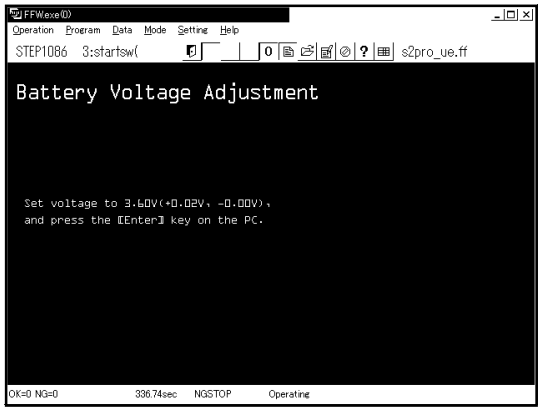
-->The **[3.60V Input Screen (Fig.15)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP1080 20:startsw(s2pro_ue.ff
Battery Voltage Adjustment
Set voltage to 3.80V(+0.02V, -0.00V), and press the [Enter] key on the PC.
OK=0 NG=0 324.08sec NGSTOP Operating

<Fig.14> 3.80V Input Screen

<Step 4>
Follow instructions on the [3.60V Input Screen (Fig.15)], and adjust BATT_END voltage. Set voltage to **3.60V(+0.02V, -0.00V)**, press the [Enter] key on the computer.

--> The **[5.00V Input Screen (Fig.16)]** is displayed.

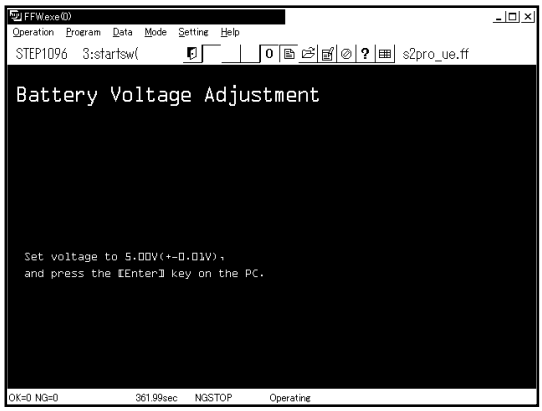

FFWexe(0)
Operation Program Data Mode Setting Help
STEP1086 3:startsw(s2pro_ue.ff
Battery Voltage Adjustment
Set voltage to 3.60V(+0.02V, -0.00V), and press the [Enter] key on the PC.
OK=0 NG=0 336.74sec NGSTOP Operating

<Fig.15> 3.60V Input Screen

<Step 5>
Follow instructions on the [5.00V Input Screen (Fig.16)], and adjust BATT_REF voltage. Set voltage to **5.00V(+0.01V, -0.01V)**, press the [Enter] key on the computer.

---> Save the adjusted data to the flash ROM when adjustment is completed normally.

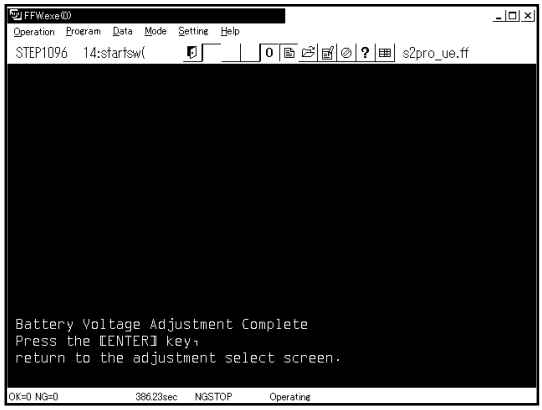
---> The **[Battery Adjustment Complete Screen (Fig.17)]** is displayed when the adjusted data is saved normally.



<Fig.16> 5.00V Input Screen

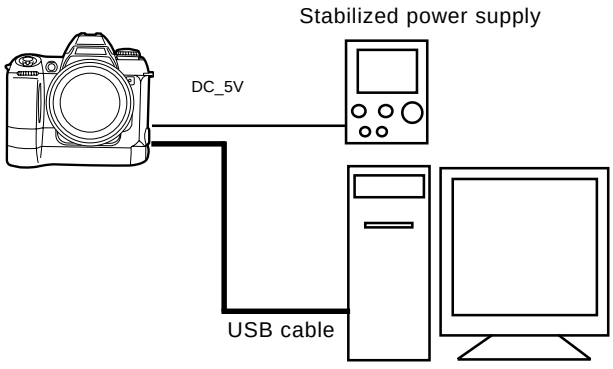
<Step 6>
Press the [Enter] key on the computer while in the [Battery Voltage Adjustment Complete Screen (Fig.17)].

---> The **[Adjustment Select Screen (Fig.4)]** is displayed. Always select [[F12]: End Setting] to complete adjustment.



<Fig.17> Battery Adjustment Complete Screen

4-14.[F11]: Rear Display Panel Adjustment

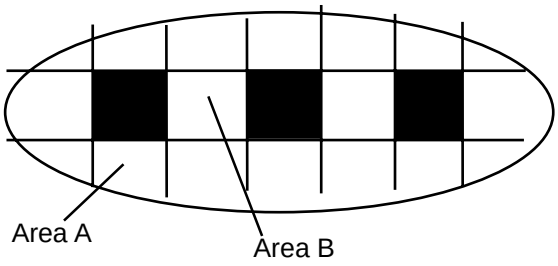


Connections for Rear display panel Adjustment

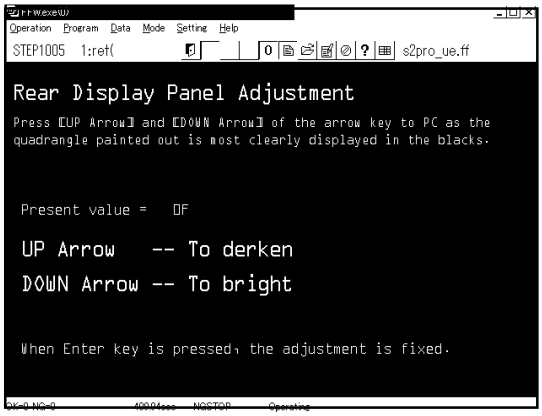
<Step 1>
Select **[F11]** from **[Adjustment Select Screen (Fig.4)]**
(ie press the [F11] key on the computer).
---> The **[Rear display panel Adjustment Preparation Screen (Fig.18)]** is displayed.

<Step 2>
Follow the instructions on the [Rear display panel Adjustment Preparation Screen (Fig.18)],
and make the following preparations.
The adjustment pattern is displayed in the rear display panel (*1).
Adjust the display using the up and down arrow keys on your computer until the pattern is most clearly visible.

*1 The adjustment pattern shown below appears on the rear display panel. In the optimum setting, no cross talk(shadowing) appears in the areas adjacent to the black sections (A and B), and the black sections appear completely black.



<Sample of the rear display panel adjustment pattern>


Operation Program Data Mode Setting Help
STEP1005 1:ret(
s2pro_ue.ff
Rear Display Panel Adjustment
Press [UP Arrow] and [DOWN Arrow] of the arrow key to PC as the quadrangle painted out is most clearly displayed in the blacks.
Present value = 0F
UP Arrow -- To derken
DOWN Arrow -- To bright
When Enter key is pressed, the adjustment is fixed.
OK=0 NG=0
NGSTOP
Operating

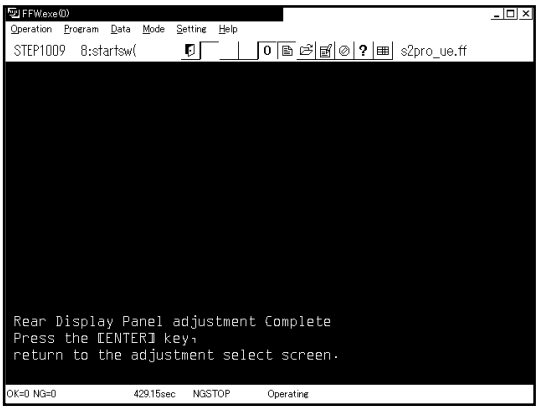
<Fig.18>Rear display panel Adjustment Preparation Screen

When you have finished the adjustments,
press the [Enter] key on your computer.

---> Save the adjusted data to the flash ROM.
---> The **[Rear display panel Adjustment Complete Screen (Fig.19)]** is displayed when the adjusted data is saved normally.

<Step 3>

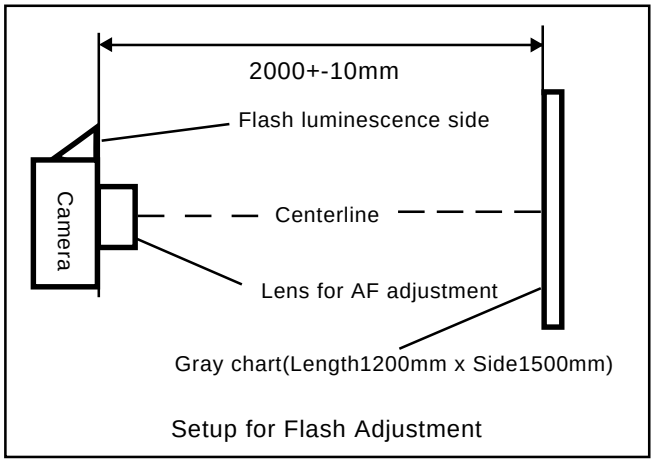
Press the [Enter] key on the computer while in the [Rear display panel Adjustment Complete Screen (Fig.19)].
---> The **[Adjustment Select Screen (Fig.4)]** is displayed.
Always select [[F12]: End Setting] to complete adjustment.



<Fig.19> Rear display panel Adjustment Complete Screen

4-15.[F7]: Flash Adjustment

[Preparations]
To adjust the flash, prepare a gray chart beforehand.
The adjustment lens is used to adjust the flash.
[Setup for Flash adjustment]
Refer to the "Setup for Flash Adjustment" figure shown at right.
[Notes]
1) Because flash adjustments are easily affected by outside light, the periphery of the gray chart should be made extremely dark to minimize interference from outside lighting.
2) When measuring the distance for flash adjustment, measure from the front of the flash emitting unit on the camera.
3) When adjusting the flash, always complete CAM adjustment before starting flash adjustment.
4) If you use CR123A batteries that are low on charge, flash charging slows down and it may not be possible to complete the adjustments. Always used fully charged batteries.



Setup for Flash Adjustment

<Step 1>
Select **[F7]** from **[Adjustment Select Screen (Fig.4)]**(ie press the [F7] key on the computer).

->The **[Flash adjustment Preparation Screen(Fig.20)]** is displayed.

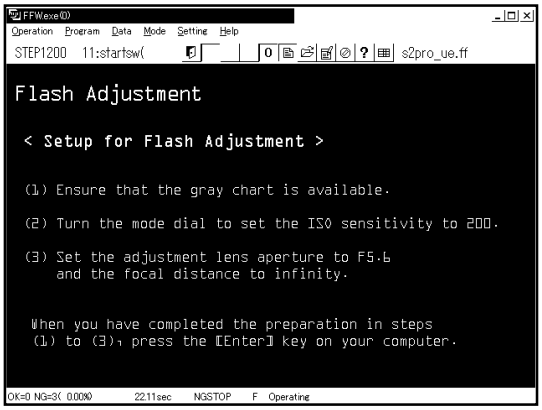
<Step 2>
Follow the instructions on the [Flash Adjustment Preparation Screen (Fig.20], and make the following preparations.
(1) Have a gray chart handy.
(2) Set the camera on a tripod.
(3) Set the adjustment lens aperture to F5.6 and the focal distance to infinity.
(4) Turn the mode dial to set the ISO sensitivity to 200.
When you have completed the preparations,
press the [Enter] key on your computer.
--->The **[Flash Adjustment Start Screen (Fig.21)]** is displayed.

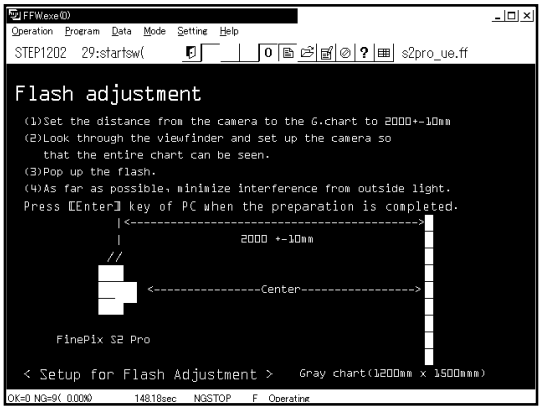
<Step 3>
Follow the instructions on the [Flash Adjustment Start Screen (Fig.21)], and make the following preparations.
(1) Set the distance from the camera to the gray chart to 2000+-10 mm.
(2) Look through the viewfinder and set up the camera so that the entire chart can be seen.
(3) Pop up the flash.
(4) As far as possible, minimize interference from outside light.
When you have completed the preparations,
press the [Enter] key on your computer.
--> Flash adjustment is performed.
--> When the adjustments are successfully completed, the adjustment data is written to the flash ROM.

<Step 4>
[Flash Adjustment Complete Screen (Fig.22)] is displayed when the adjusted data is saved normally.
Press the [Enter] key on the computer while in the

Flash Adjustment Complete Screen (Fig.22)].

---> The **[Adjustment Select Screen (Fig.4)]** is displayed.


FFWexe
Operation Program Data Mode Setting Help
STEP1200 11:sfartsw(s2pro_ue.ff
Flash Adjustment
< Setup for Flash Adjustment >
(1) Ensure that the gray chart is available.
(2) Turn the mode dial to set the ISO sensitivity to 200.
(3) Set the adjustment lens aperture to F5.6
and the focal distance to infinity.
When you have completed the preparation in steps
(1) to (3), press the [Enter] key on your computer.
OK=0 NG=3(0.00%) 22.11sec NGSTOP F Operating
<Fig.20> Flash Adjustment Preparation Screen


FFWexe
Operation Program Data Mode Setting Help
STEP1202 29:sfartsw(s2pro_ue.ff
Flash adjustment
(1)Set the distance from the camera to the G.chart to 2000+-10mm
(2)Look through the viewfinder and set up the camera so
that the entire chart can be seen.
(3)Pop up the flash.
(4)As far as possible, minimize interference from outside light.
Press [Enter] key of PC when the preparation is completed.
2000 +-10mm
Center
FinePix S2 Pro
< Setup for Flash Adjustment > Gray chart(1200mm x 1500mm)
OK=0 NG=9(0.00%) 148.18sec NGSTOP F Operating
<Fig.21> Flash Adjustment Start Screen

FFWexe
Operation Program Data Mode Setting Help
STEP1260 13:sfartsw(s2pro_ue.ff
Flash Adjustment Complete
Press the [ENTER] key,
return to the adjustment select screen.
OK=0 NG=11(0.00%) 70.03sec NGSTOP F Operating
<Fig.22> Flash Adjustment Compiete Screen

☆ 4-16.[F6]: AF offset adjustment

*1 Because the name of the adjustment gives rise to misunderstandings, it has been changed from AF adjustment to “AF offset adjustment”.

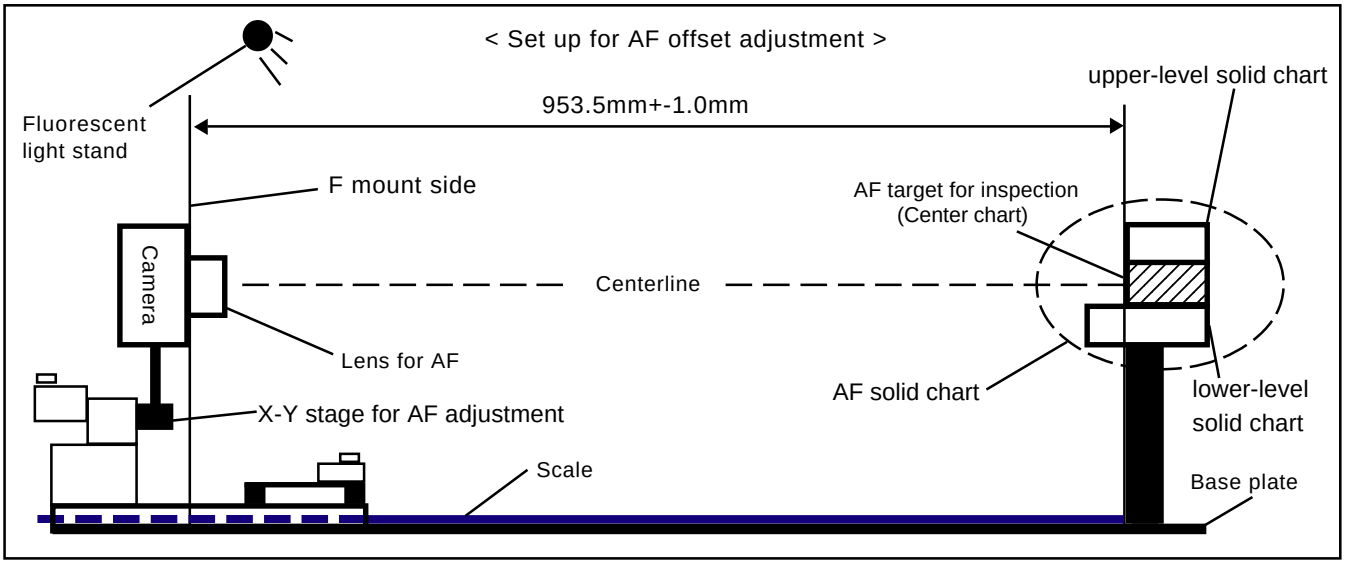
*2 When the Nikon body and CCD HOLDER ASSY are assembled, physical variations can arise in the focal position of the CCD surface (focal length). To compensate for these variations during AF operation, correction data is uploaded to the Nikon body during AF offset adjustment.

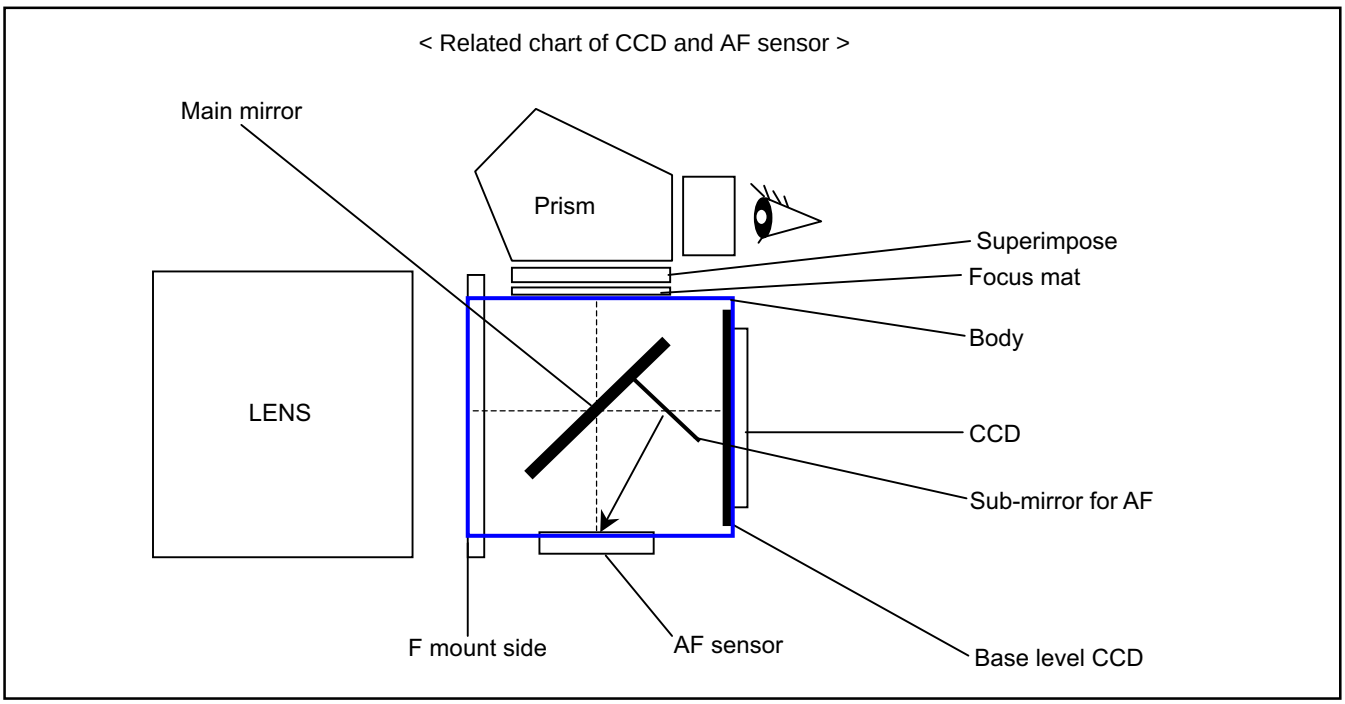
*3 Together with the added AF checking, the environment for AF adjustment has been modified.

1. Notes on making adjustments following the addition of the AF intermediate chart
   (1) Because the focusing chart is split between top and bottom, it is difficult to check between the top and bottom halves in the preview image (step 7). To overcome this problem, use an application such as Photoshop to compare the images.
   (2) Use a flat light source to illuminate the entire chart. If the light source illuminates the chart surface unevenly, the appearance of the optimum focal point will change. To avoid this, use a light source which illuminates the top and bottom of the chart uniformly.
2. The X-Y stage used for AF adjustment is movable. Make a note of the shooting distance when making adjustments.

[NOTE]

If you are unsure when selecting the best image, consider the blurring in the focus for the previous and subsequent images and then select the optimum value.





Revised:24.Mar.2003

[Preparations]
To perform AF offset adjustment, prepare an AF adjustment lens and AF solid chart jig beforehand.
[Notes]
1) When measuring the distance for AF adjustment, measure from the front of the F mount on the camera.
2) To perform AF offset adjustment, you must obtain the AF adjustment correction data beforehand. The adjustment procedure is described below starting with the AF adjustment correction data creation method.

<Step 1>
Select **[F6]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F6] key on the computer).

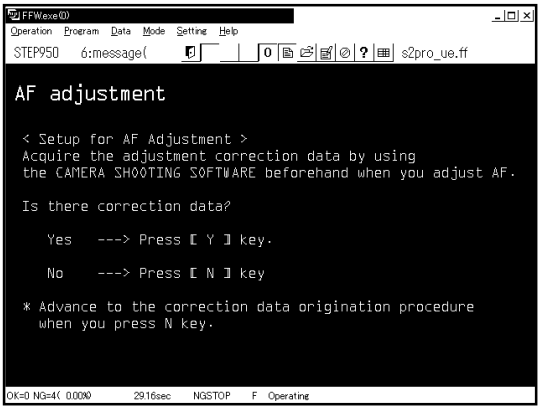
---> The **[AF Adjustment Selection Screen (Fig.23)]** is displayed.

<Step 2>
As directed by the instructions in the [AF adjustment selection screen (Fig.23)], press the "Y" key on your PC if there is correction data or the "N" key if not.
The explanation given here assumes that there is no correction data, so press the "N" key.
(Press the "Y" key if there is correction data.)

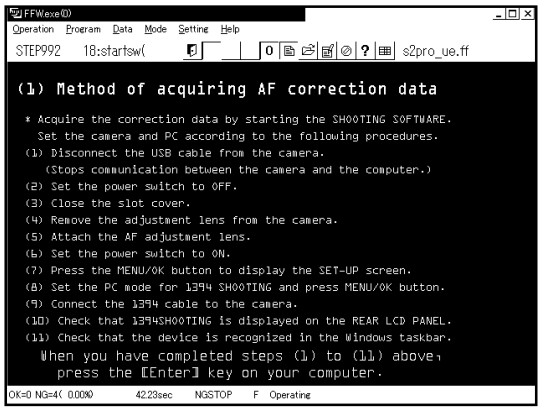
-->The **[Correction data acquisition method(1)(Fig.24)]** is displayed.

<Step 3>
Perform the following, as directed by the instructions in the "Correction data acquisition method" window (1) (Fig.24).
(1) Disconnect the USB cable from the camera.
(Stops communication between the camera and the computer.)
(2) Set the power switch to OFF.
(3) Close the slot cover.
(4) Remove the adjustment lens from the camera.
(5) Attach the AF adjustment lens.
(6) Set the power switch to ON.
(7) Press the "MENU/OK" button to display the SET-UP screen.
(8) Set the PC mode for 1394 photography and press the "MENU/OK" button.
(9) Connect the 1394 cable to the camera.
(10) Check that "1394 PHOTOGRAPHY" is displayed on the rear text LCD panel.
(11) Check that the device is recognized in the Windows taskbar.
(12)When you have completed steps (1) to (11) above, press the [Enter] key on your computer.

-->The **[Correction data acquisition method(2)(Fig.25)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP950 6:message(s2pro_ue.ff
AF adjustment
< Setup for AF Adjustment >
Acquire the adjustment correction data by using
the CAMERA SHOOTING SOFTWARE beforehand when you adjust AF.
Is there correction data?
Yes ---> Press [Y] key.
No ---> Press [N] key
* Advance to the correction data origination procedure
when you press N key.
OK=0 NG=4(0.00%) 29.16sec NGSTOP F Operating

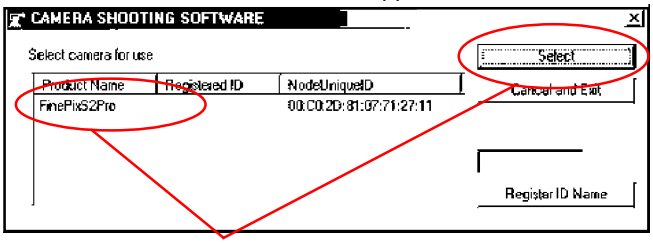
<Fig.23> AF Adjustment Selection Screen


FFWexe(0)
Operation Program Data Mode Setting Help
STEP992 18:startsw(s2pro_ue.ff
(1) Method of acquiring AF correction data
* Acquire the correction data by starting the SHOOTING SOFTWARE.
Set the camera and PC according to the following procedures.
(1) Disconnect the USB cable from the camera.
(Stops communication between the camera and the computer.)
(2) Set the power switch to OFF.
(3) Close the slot cover.
(4) Remove the adjustment lens from the camera.
(5) Attach the AF adjustment lens.
(6) Set the power switch to ON.
(7) Press the MENU/OK button to display the SET-UP screen.
(8) Set the PC mode for 1394 SHOOTING and press MENU/OK button.
(9) Connect the 1394 cable to the camera.
(10) Check that 1394SHOOTING is displayed on the REAR LCD PANEL.
(11) Check that the device is recognized in the Windows taskbar.
When you have completed steps (1) to (11) above,
press the [Enter] key on your computer.
OK=0 NG=4(0.00%) 42.23sec NGSTOP F Operating

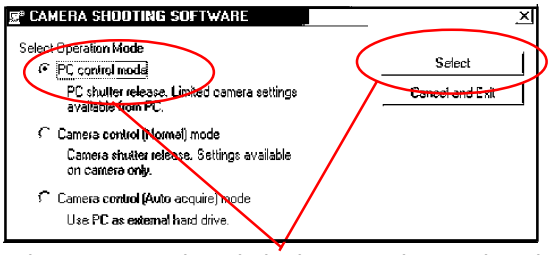
<Fig.24> Correction data acquisition method(1)

<Step 4>
Perform the following, as directed by the instructions in the "Correction data acquisition method" window (2) (Fig.25).
(1) Mount the camera on the stand for the AF solid chart.
(2) Check that the AF target mark in the center of the viewfinder screen can be seen in the center of the AF solid chart.
(3) Set the AF adjustment lens aperture to fully open (F1.4).
(4) When you have completed steps (1) to (3) above, press the [Enter] key on your computer.
-->The **[Correction data acquisition method(3)(Fig.26)]** is displayed.

<Step 5>
Perform the following as directed by the instructions in the "Correction data acquisition method" window (3) (Fig.26).
(1) Double-click "S2Pshoot.exe" (Fig.27-(1)).
* Before using the above software, install the Camera Shooting Software on your computer.
--> The camera selection window appears.



(2) Select "S2Pro" in the camera selection window.
--> The operation mode selection window appears.

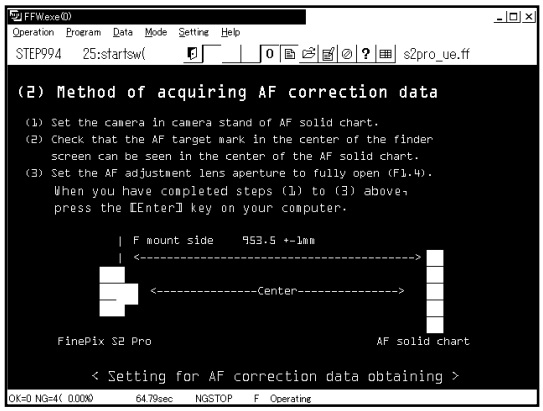

CAMERA SHOOTING SOFTWARE
Select Operation Mode
PC control mode
PC shutter release. Linked camera settings available from PC.
Camera control (Normal) mode
Camera shutter release. Settings available on camera only.
Camera control (Auto acquire) mode
Use PC as external hard drive.
Select
Cancel and Exit

(3) Select PC control mode in the operation mode selection window.
--> The Camera Shooting Software starts up (Fig.28).

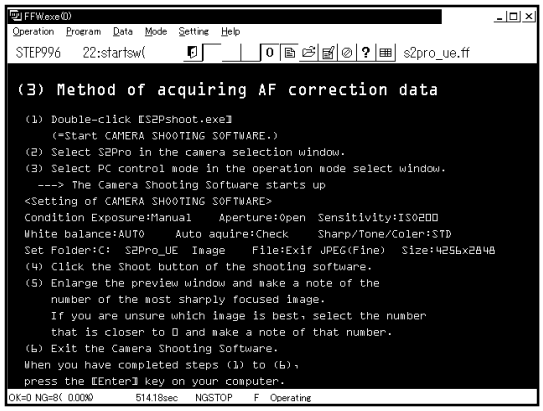
☆ <Step 6>
Specify the settings described below in the "Camera Shooting Software Settings" window, **and, click the "Apply" button after setting <STEP6>.**

Shoothing Condition	Exposure:Manual Metering:Matrix Shutter speed:1/125 Aperture:Open Sensitivity:ISO200 White balance:AUTO Tone curve/Sharp/Color:STD
Preview	Not rotate
File	File format:Exif JPEG(Fine) Image size:4256 x 2848 Set Folder:C:\ S2Pro_UE \ Image Auto aquire:Use (=check)

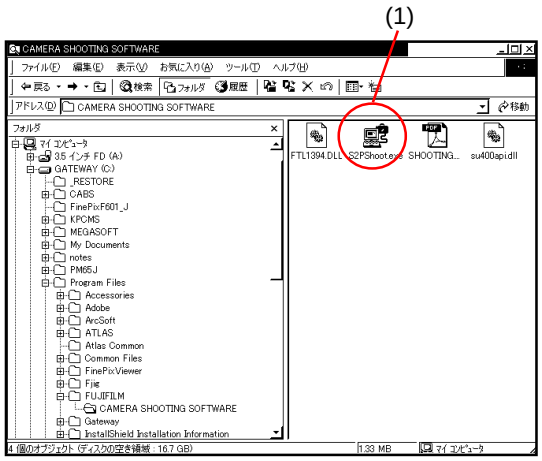
<Step 7>
After you have completed the Camera Shooting Software settings, click the **"Shoot"** button in the shooting software (Fig.28-(1)).


FFWexe(0)
Operation Program Data Mode Setting Help
STEP994 25:startsw(
s2pro_ue.ff
(2) Method of acquiring AF correction data
(1) Set the camera in camera stand of AF solid chart.
(2) Check that the AF target mark in the center of the finder screen can be seen in the center of the AF solid chart.
(3) Set the AF adjustment lens aperture to fully open (F1.4).
When you have completed steps (1) to (3) above, press the [Enter] key on your computer.
F mount side 953.5 +-1mm
<----------Center----------
FinePix S2 Pro
AF solid chart
< Setting for AF correction data obtaining >
OK=0 NG=4(0.00%) 64.79sec NGSTOP F Operating

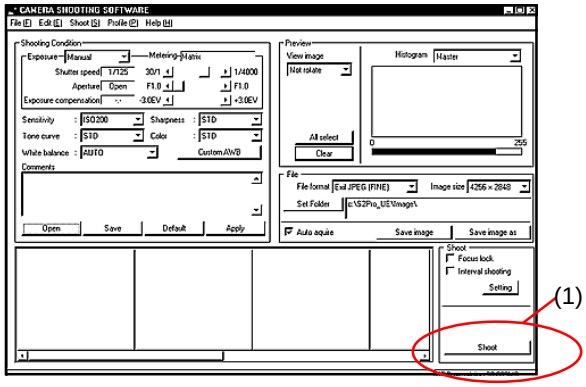
<Fig.25> Correction data acquisition method(2)


FFWexe(0)
Operation Program Data Mode Setting Help
STEP996 22:startsw(
s2pro_ue.ff
(3) Method of acquiring AF correction data
(1) Double-click [S2Pshoot.exe]
(=Start CAMERA SHOOTING SOFTWARE.)
(2) Select S2Pro in the camera selection window.
(3) Select PC control mode in the operation mode select window.
---> The Camera Shooting Software starts up
<Setting of CAMERA SHOOTING SOFTWARE>
Condition Exposure:Manual Aperture:Open Sensitivity:ISO200
White balance:AUTO Auto aquire:Check Sharp/Tone/Color:STD
Set Folder:C: S2Pro_UE Image File:Exif JPEG(Fine) Size:4256x2848
(4) Click the Shoot button of the shooting software.
(5) Enlarge the preview window and make a note of the number of the most sharply focused image.
If you are unsure which image is best, select the number that is closer to 0 and make a note of that number.
(6) Exit the Camera Shooting Software.
When you have completed steps (1) to (6), press the [Enter] key on your computer.
OK=0 NG=8(0.00%) 514.18sec NGSTOP F Operating

<Fig.26> Correction data acquisition method(3)



<Fig.27> Screen of Windows of S2Pshoot.exe



<Fig.28> Camera Shooting Software Settings

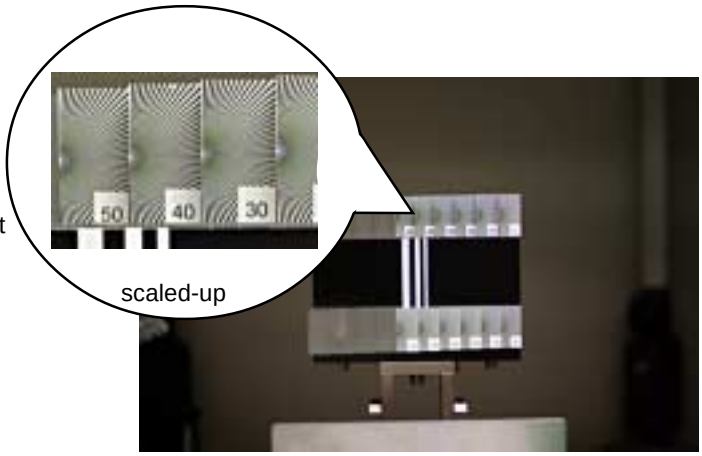
--> A picture of the AF solid chart is taken and displayed in the "Preview" window (Fig.29).

<Step 8>

Enlarge the preview window and make a note of the number of the most sharply focused image. Here, "40" is the number of the best image. (Values between -50 and 50 can be used.)

[Note]

If you are unsure which image is best, select the number that is closer to "0" and make a note of that number. So, if you cannot decide between "40" and "50", choose "40". Similarly, if you cannot decide between "-20" and "-30", choose "-20".



<Fig.29> Preview screen

<Step 9>

When you have made a note of the correction data, exit the Camera Shooting Software.

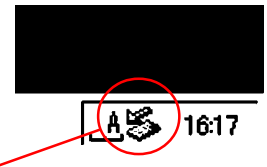
<Step 10>

Press the "Enter" key on your computer, as directed by the instructions in the "Correction data acquisition method" window (3).

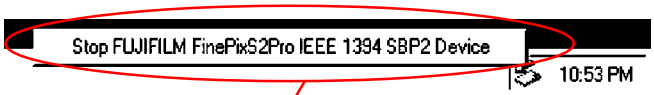
--> The **"Correction data acquisition method (4)"** window (Fig.30) appears.

<Step 11>

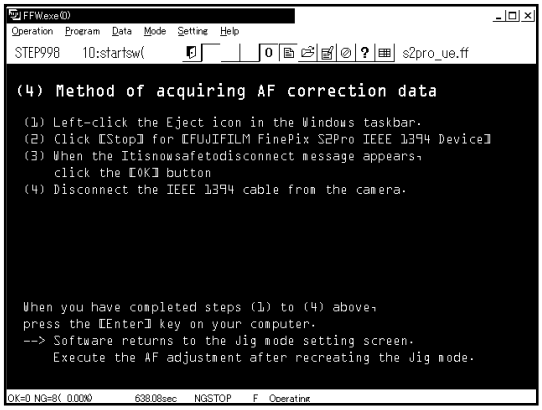
Perform the following, as directed by the instructions in the "Correction data acquisition method (4)" window (Fig.30).



(1) Left-click the Eject icon in the Windows taskbar.



(2) Click "Stop" for "FUJIFILM FinePix S2Pro IEEE 1394 Device".


FFWexe(0)
Operation Program Data Mode Setting Help
STEP998 10:startsw(s2pro_ue.ff
(4) Method of acquiring AF correction data
(1) Left-click the Eject icon in the Windows taskbar.
(2) Click [Stop] for [FUJIFILM FinePix S2Pro IEEE 1394 Device]
(3) When the Itisnowsafetodisconnect message appears,
click the [OK] button
(4) Disconnect the IEEE 1394 cable from the camera.
When you have completed steps (1) to (4) above,
press the [Enter] key on your computer.
--> Software returns to the Jig mode setting screen.
Execute the AF adjustment after recreating the Jig mode.
OK=0 NG=0(0.00%) 638.08sec NGSTOP F Operating

<Fig.30> Correction data acquisition method(4)

(3) When the "It is now safe to disconnect" message appears, click the [OK] button (not shown).

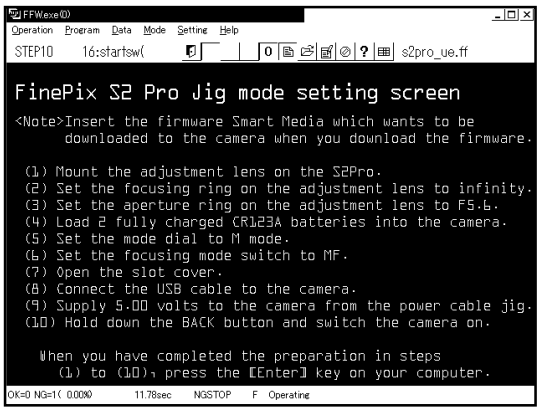
(4) Disconnect the IEEE 1394 cable from the camera.

[NOTE]

If the IEEE 1394 cable is disconnected from the camera without first stopping the device, an error message appears on the computer. In some cases this may cause the computer to hang.

(5) When you have completed steps (1) to (4) above, press the [Enter] key on your computer.

--> The **[FinePix S2 Pro Jig Mode Setup Screen(Fig.31)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP10 16:startsw(s2pro_ue.ff
FinePix S2 Pro Jig mode setting screen
<Note>Insert the firmware Smart Media which wants to be downloaded to the camera when you download the firmware.
(1) Mount the adjustment lens on the S2Pro.
(2) Set the focusing ring on the adjustment lens to infinity.
(3) Set the aperture ring on the adjustment lens to F5.6.
(4) Load 2 fully charged CR123A batteries into the camera.
(5) Set the mode dial to M mode.
(6) Set the focusing mode switch to MF.
(7) Open the slot cover.
(8) Connect the USB cable to the camera.
(9) Supply 5.00 volts to the camera from the power cable jig.
(10) Hold down the BACK button and switch the camera on.
When you have completed the preparation in steps (1) to (10), press the [Enter] key on your computer.
OK=0 NG=1(0.00%) 11.78sec NGSTOP F Operating

<Fig.31> FinePix S2 Pro Jig Mode Setup Screen

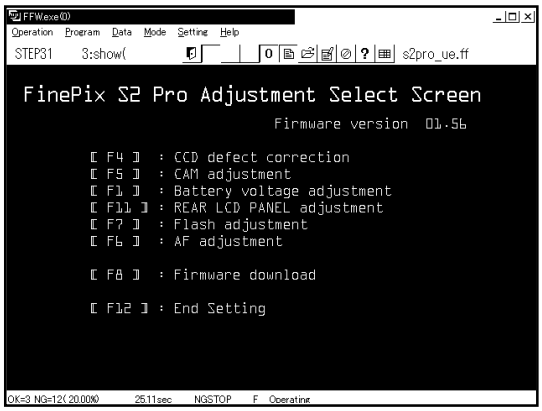
<Step 12>

Set the camera to Jig mode again as directed by the instructions in the "Jig Mode Settings" window (figure 29) and press the [Enter] key on your computer.

--> The **[Adjustment Select Screen (Fig.32)]** is displayed.

<Step 13>
Select **[F6]** from **[Adjustment Select Screen (Fig.32)]** (ie press the [F6] key on the computer).

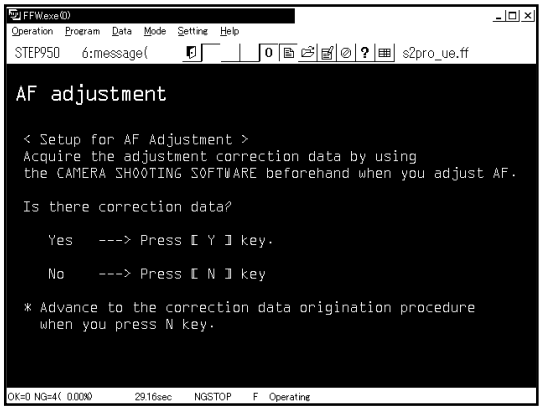
---> The **[AF Adjustment Selection Screen (Fig.33)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP31 3:show(s2pro_ue.ff
FinePix S2 Pro Adjustment Select Screen
Firmware version 01.56
[F4] : CCD defect correction
[F5] : CAM adjustment
[F1] : Battery voltage adjustment
[F11] : REAR LCD PANEL adjustment
[F7] : Flash adjustment
[F6] : AF adjustment
[F8] : Firmware download
[F12] : End Setting
OK=3 NG=12(20.00%) 25.11sec NGSTOP F Operating

<Fig.32> Adjustment Select Screen

<Step 14>
Press the "Y" key on your PC as directed by the instructions in the "AF adjustment selection" window (Fig.33).

--> The "AF correction input" window (figure 34) appears.

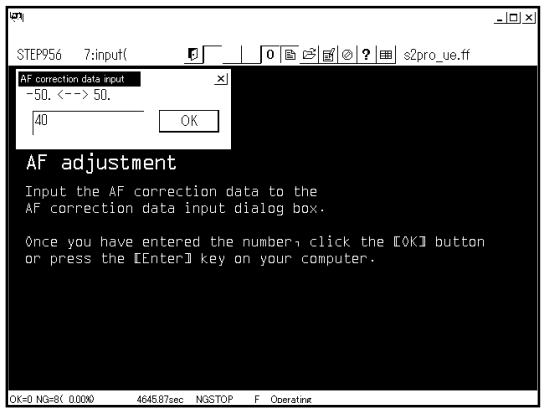

FFWexe(0)
Operation Program Data Mode Setting Help
STEP950 6:message(s2pro_ue.ff
AF adjustment
< Setup for AF Adjustment >
Acquire the adjustment correction data by using
the CAMERA SHOOTING SOFTWARE beforehand when you adjust AF.
Is there correction data?
Yes ---> Press [Y] key.
No ---> Press [N] key
* Advance to the correction data origination procedure
when you press N key.
OK=0 NG=4(0.00%) 29.16sec NGSTOP F Operating

<Fig.33> AF Adjustment Selection Screen

<Step 15>
As directed by the instructions in the "AF correction input" window (Fig. 34), enter the correction data obtained in step 7 in the AF correction data input dialog box. Here, enter "40" and then click [OK] or press the [Enter] key on your computer.

--> AF adjustment is performed.

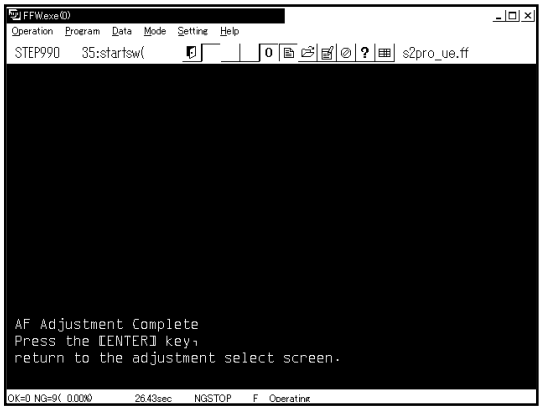
--> When the adjustments are successfully completed, the adjustment data is written to the flash ROM.


STEP956 7:input(s2pro_ue.ff
AF correction data input
-50. <--> 50.
40
OK
AF adjustment
Input the AF correction data to the
AF correction data input dialog box.
Once you have entered the number, click the [OK] button
or press the [Enter] key on your computer.
OK=0 NG=8(0.00%) 4645.87sec NGSTOP F Operating

<Fig.34> AF correction input screen

<Step 16>
--> When the adjusted data is saved normally, the **[AF Adjustment Complete Screen (Fig.35)]** is displayed. Press the [Enter] key on the computer while in the [AF Adjustment Complete Screen (Fig.35)].

---> The **[Adjustment Select Screen (Fig.4)]** is displayed. Select and make any further adjustments from the screen.

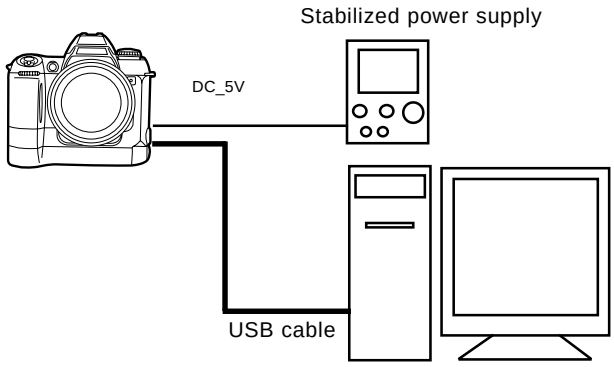

FFWexe(0)
Operation Program Data Mode Setting Help
STEP990 35:startsw(s2pro_ue.ff
AF Adjustment Complete
Press the [ENTER] key,
return to the adjustment select screen.
OK=0 NG=9(0.00%) 26.43sec NGSTOP F Operating

<Fig.35> AF Adjustment Complete Screen

4-17.[F8]: Downloading Firmware

[Preparations]
When downloading firmware, insert the SmartMedia used for downloading into the camera before setting the camera to Jig mode.

[Connections for Downloading Firmware]
Refer to the "Connections for Downloading Firmware" figure shown at right.
[Notes]
1)Order firmware downloading separately, as required. Do not use this adjustment procedure until then.
2)As at 15/6/02, the firmware version for the FinePix S2 Pro is "1.56".

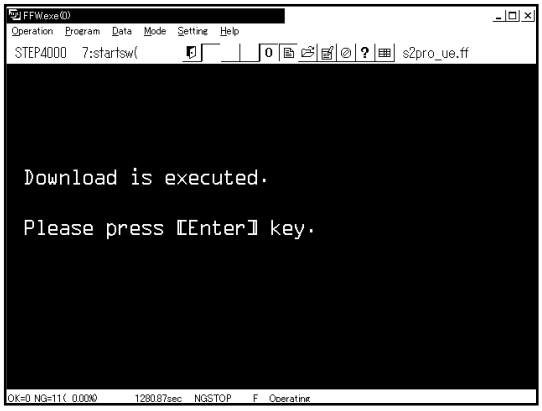


Connections for Downloading Firmware

<Step 1>
Select **[F8]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F8] key on the computer).

-> The **[Run Download Screen (Fig.36)]** is displayed.

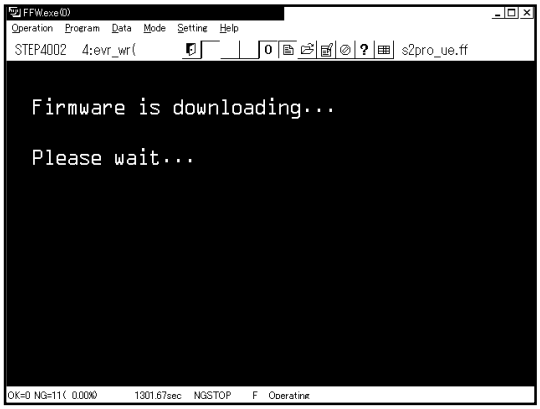
<Step 2>
Follow the instructions on the [Run Download Screen (Fig.36)], and press the [Enter] key on the computer.



<Fig.36> Run Download Screen

-> The **[Downloading Screen (Fig.37)]** is displayed. Downloading requires between 1.5 and 2 minutes.

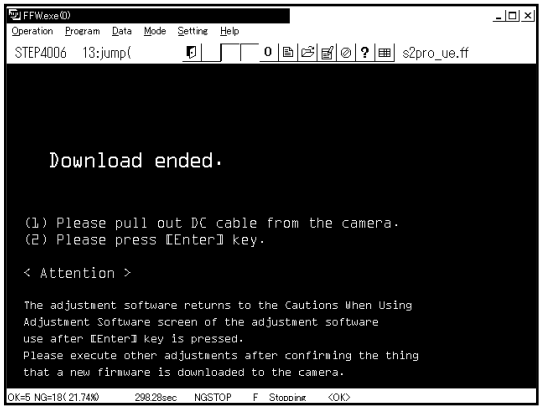
-> The **[Download Complete Screen (Fig.38)]** is displayed when the firmware has been downloaded successfully.



<Fig.37> Downloading Screen

<Step 3>
Carry out the following in accordance with the instructions on the [Download Complete Screen (Fig.38)].
(1) Remove the DC jack from the camera.
(2) Press the [Enter] key on the computer.

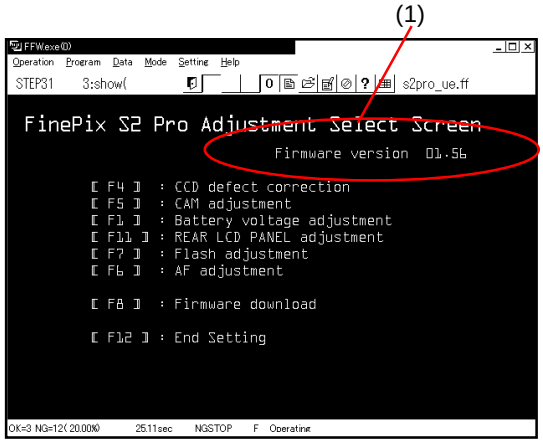
--> The "Jig Mode Settings" window (not shown) appears.


FFW.exe(0)
Operation Program Data Mode Setting Help
STEP4006 13:jump(
s2pro_ue.ff
Download ended.
(1) Please pull out DC cable from the camera.
(2) Please press [Enter] key.
< Attention >
The adjustment software returns to the Cautions When Using Adjustment Software screen of the adjustment software use after [Enter] key is pressed.
Please execute other adjustments after confirming the thing that a new firmware is downloaded to the camera.
OK=5 NG=18(21.74%) 298.28sec NGSTOP F Stopping <OK>

<Fig.38> Download Complete Screen Screen

<Step 4>
Set the camera to Jig mode as directed by the instructions in the "Jig Mode Settings" window (not shown) and then press the [Enter] key on your computer.

--> The **[Adjustment Select Screen (Fig.39)]** is displayed.


(1)
FFW.exe(0)
Operation Program Data Mode Setting Help
STEP31 3:show(
s2pro_ue.ff
FinePix S2 Pro Adjustment Select Screen
Firmware version 01.56
[F4] : CCD defect correction
[F5] : CAM adjustment
[F1] : Battery voltage adjustment
[F11] : REAR LCD PANEL adjustment
[F7] : Flash adjustment
[F6] : AF adjustment
[F8] : Firmware download
[F12] : End Setting
OK=3 NG=12(20.00%) 25.11sec NGSTOP F Operating

<Fig.39> Adjustment Select Screen

<Step 5>
Check that firmware version displayed in the "**Adjustment Select Screen**" window (Fig.39-(1)) is updated.

4-18. [F12]: End Setting

(Destination setting/USB_ID write/IEEE1394_ID write/Product mode setting)

* The exit settings consist of the destination setting, the USB_ID write, IEEE1394_ID write, and product mode settings (= Mass Storage recognition).
* These settings must always be specified when you exit this adjustment software. If these settings are not specified, the camera will not be recognized as a mass storage unit when it is connected to a computer.
* Details of USB_ID/IEEE_ID writing

(1)The USB_ID/IEEE_ID is written because "devices (in this case the FinePix S2 Pro) must be uniform throughout the world and there is consequently an obligation under the standards to assign a device-specific ID." If multiple devices with the same USB_ID/IEEE_ID are connected to a computer, the computer will be unable to recognize those devices and operation failures will occur.

(2)The automatically written USB_ID is as shown below.

Item	Details
Repair Date	Date information is acquired from the PC and written.
Administrator ID	C(43)
Repair Station	<U-model>
	U.S.:61(a)
	Canada:62(b)
	Hawaii:63(c)
	Taiwan:64(d)
	Others:65(e)
	<E-model>
	England:66(f)
	Germany:67(g)
	France:68(h)
	Spain:69(i)
	Italy:6A(j)
	Netherlands:6B(k)
	Belgium:6C(l)
	Sweden:6D(m)
	Switzerland:6E(n)
	Norway:6F(o)
	Finland:70(p)
	Singapore:71(q)
	Others:72(r)
Repair SerialNo.	A serial No. is assigned automatically and written

* Numbers in parentheses are in decimal notation. All other numbers are in ASCII numbers.

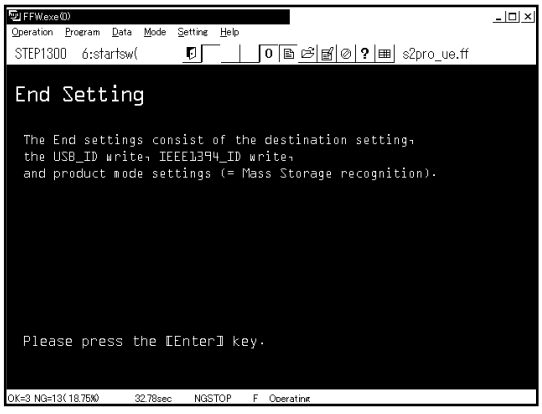
(3) The automatically written IEEE_ID is as shown below.

Item	Details
Administrator ID	07
Repair Station	<U-model>
	U.S.:61
	Canada:62
	Hawaii:63
	Taiwan:64
	Others:65
	<E-model>
	England:66
	Germany:67
	France:68
	Spain:69
	Italy:6A
	Netherlands:6B
	Belgium:6C
	Sweden:6D
	Switzerland:6E
	Norway:6F
	Finland:70
	Singapore:71
	Others:72
Repair SerialNo.	Sereal No. of the camera is given and written.

* The number is hexadecimal numbers.

<Step 1>
Select **[F12]** from **[Adjustment Select Screen (Fig.4)]** (ie press the [F12] key on the computer).
---> The **[End Setting Start Screen (Fig.40)]** is displayed.

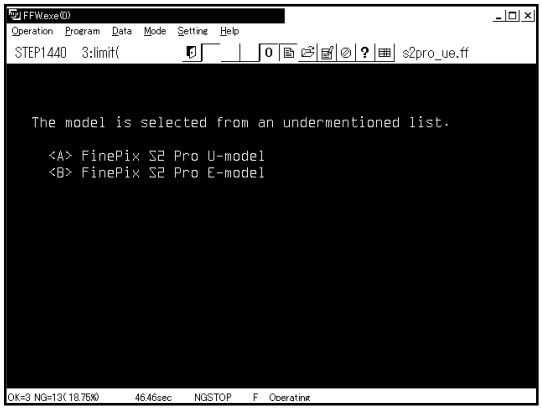
<Step 2>
Follow instructions on the [End Setting Start Screen (Fig.40)], and press the [Enter] key on the computer.
---> The **[Destination Settings Screen (Fig.41)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP1300 6:startsw(
s2pro_ue.ff
End Setting
The End settings consist of the destination setting,
the USB_ID write, IEEE1394_ID write,
and product mode settings (= Mass Storage recognition).
Please press the [Enter] key.
OK=3 NG=13(18.75%) 32.78sec NGSTOP F Operating

<Fig.40> End Setting Start Screen

<Step 3>
Follow instructions on the [Destination Settings Screen (Fig.41)], and press the [A] key on the computer.

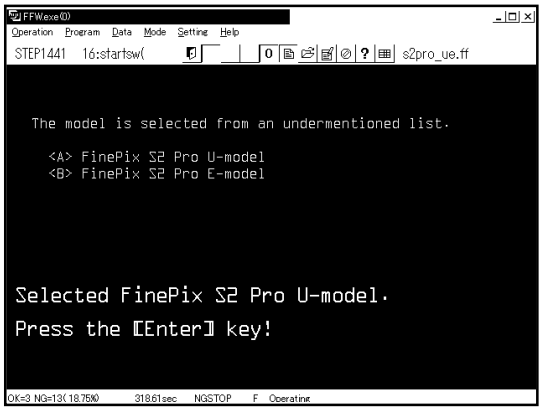
--->The **[U-MODEL Select Screen (Fig.42)]** is displayed.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP1440 3:limit(s2pro_ue.ff
The model is selected from an undermentioned list.
<A> FinePix S2 Pro U-model
<B> FinePix S2 Pro E-model
OK=3 NG=13(18.75%) 46.46sec NGSTOP F Operating

<Fig.41> Destination Settings Screen(USB)

<Step 4>
Follow instructions on the [U-MODEL Select Screen (Fig.42)], and press the [Enter] key on the computer.

---> The **[Repair base selection (Fig.43)]** is displayed.

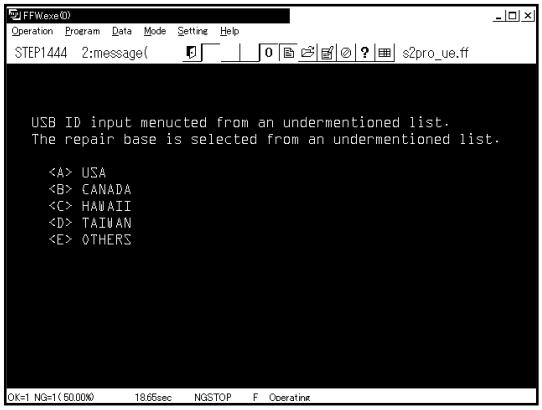

FFWexe(0)
Operation Program Data Mode Setting Help
STEP1441 16:startsw(s2pro_ue.ff
The model is selected from an undermentioned list.
<A> FinePix S2 Pro U-model
<B> FinePix S2 Pro E-model
Selected FinePix S2 Pro U-model.
Press the [Enter] key!
OK=3 NG=13(18.75%) 318.61sec NGSTOP F Operating

<Fig.42> U-MODEL Select Screen

<Step 6>
In the "Repair base selection" window (Fig 43), select the base at which repairs were carried out.

In the "Repair base selection(USB)" window (Fig. 43), select the base at which repairs were carried out.
* In the description given in this manual, The U.S.A. is selected as the repair base. Select "[A] USA"*.
(ie press the [A] key on the computer).

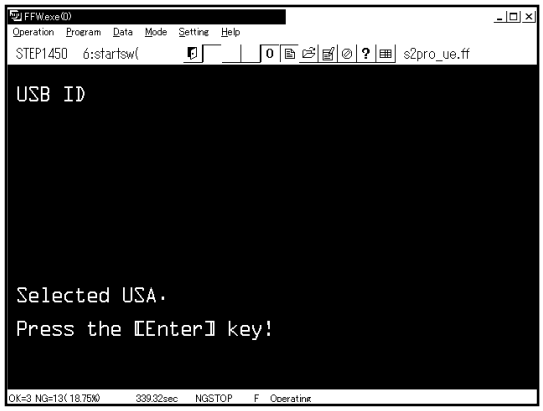
---> The **[USA selection screen (USB) (Fig.44)]** is displayed.



<Fig.43> Repair base selection (USB)

<Step 7>
Press the [Enter] key on your PC as directed by the instructions in the [USA selection screen (Fig.44)].

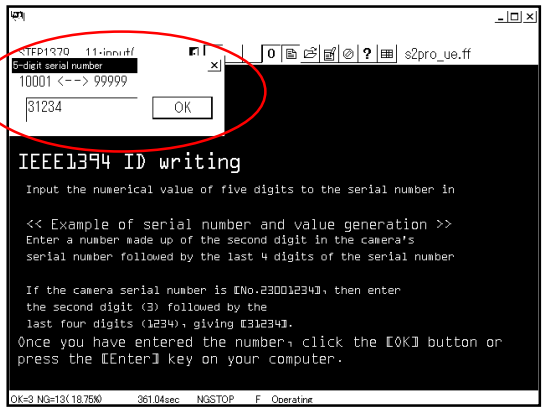
--> The **"Write IEEE1394_ID" window (Fig.45)** appears.



<Fig.44>USA selection screen (USB)

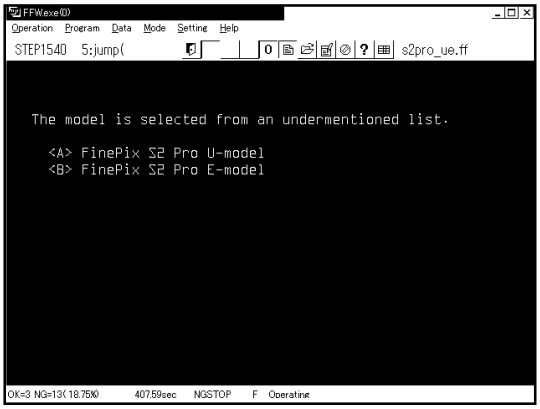
<Step 8>
Enter a 5-digit serial number in the serial number input dialog box as directed by the instructions in the "Enter IEEE_ID serial number" window (Fig 45).
[Example of serial number and value generation]
Enter a number made up of the second digit in the camera's serial number followed by the last 4 digits of the serial number.
If the camera serial number is "No.23001234", then enter the second digit (3) followed by the last four digits (1234), giving "31234".
Once you have entered the number, click the [OK] button or press the [Enter] key on your computer.

---> The **[Destination Settings Screen (Fig.46)]** is displayed.


5-digit serial number
10001 <--> 99999
31234
OK
IEEE1394 ID writing
Input the numerical value of five digits to the serial number in
<< Example of serial number and value generation >>
Enter a number made up of the second digit in the camera's
serial number followed by the last 4 digits of the serial number
If the camera serial number is [No.23001234], then enter
the second digit (3) followed by the
last four digits (1234), giving [31234].
Once you have entered the number, click the [OK] button or
press the [Enter] key on your computer.
<Fig.45> IEEE_ID serial number input screen

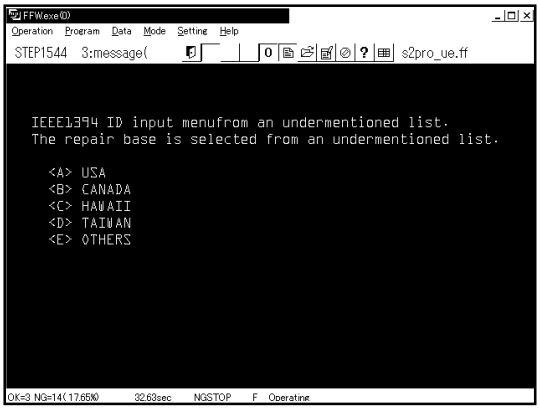
<Step 9>
Follow instructions on the [Destination Settings Screen (Fig.46)], and press the [A] key on the computer.

---> The **[Repair base selection (Fig.47)]** is displayed.


Operation Program Data Mode Setting Help
STEP1540 5:jump(
The model is selected from an undermentioned list.
<A> FinePix S2 Pro U-model
<B> FinePix S2 Pro E-model
<Fig.46> Destination Settings Screen

<Step 10>
In the "Repair base selection(IEEE)" window (Fig. 47), select the base at which repairs were carried out.
* In the description given in this manual, The U.S.A. is selected as the repair base. Select "[A] USA"*.
(ie press the [A] key on the computer).

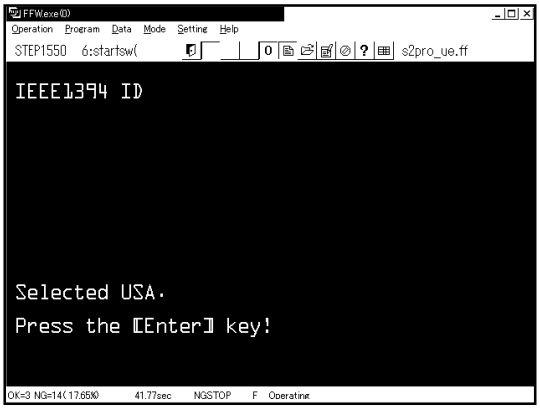
--> The **[USA selection screen (IEEE)(Fig.48)]** is displayed.



<Fig.47> Repair base selection(IEEE)

<Step 11>
Press the [Enter] key on your PC as directed by the instructions in the [USA selection screen (IEEE)(Fig.48)].

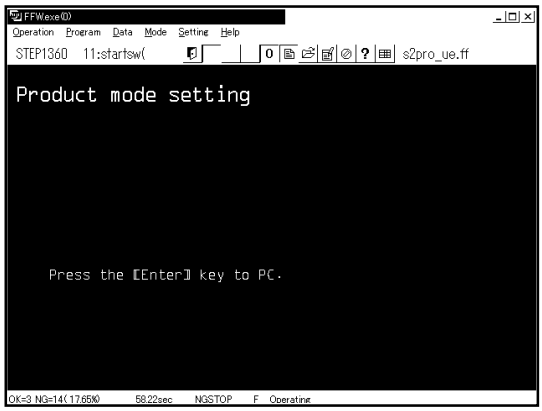
---> The **[Product Mode Setting Screen (Fig.49)]** is displayed.



<Fig.48> USA selection screen (IEEE)

<Step 12>
Press the [Enter] key on the computer while in the **[Product Mode Setting Screen (Fig.49)].**

---> When the settings are completed normally they are saved to the flash ROM, and the **[FinePix S2 Pro Adjustment End Screen (Fig.50)]** is displayed.

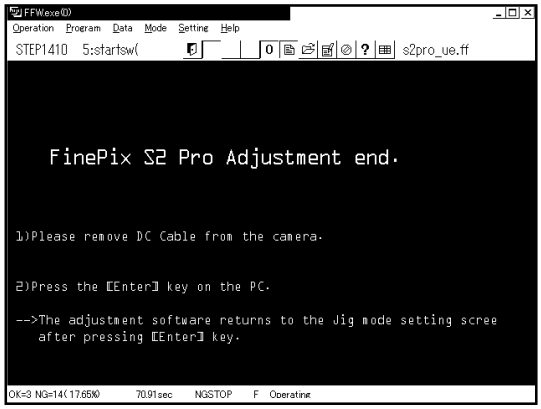


<Fig.49> Product Mode Setting Screen

<Step 13>
Follow the instructions on the [FinePix S2 Pro Adjustment end Screen (Fig.50)].

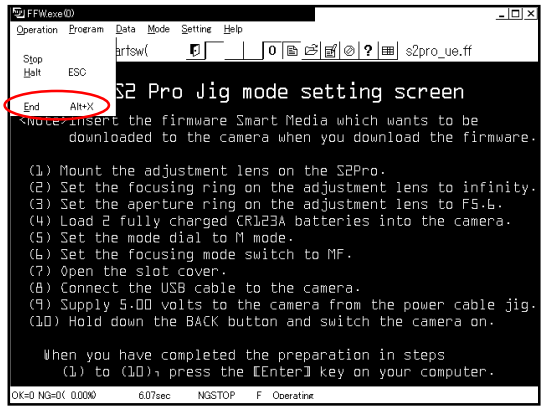
1) Disconnect the DC cable from the camera.
2) press the [Enter] key on your computer.

---> The display returns to the **[Jig Mode Setup Screen (Fig.51)]** after pressing the [Enter] key on the computer.


FFWexe(0)
Operation Program Data Mode Setting Help
STEP1410 5:startsw(
s2pro_ue.ff
FinePix S2 Pro Adjustment end.
1)Please remove DC Cable from the camera.
2)Press the [Enter] key on the PC.
-->The adjustment software returns to the Jig mode setting scree
after pressing [Enter] key.
OK=3 NG=14(17.65%) 70.91sec NGSTOP F Operating

<Fig.50> FinePix S2 Pro Adjustment End Screen

<Step 14>
When adjustment is complete, select Operation --> End on the adjustment software menu bar in the [Jig Mode Setup Screen (Fig.51)] to terminate the adjustment software.


FFWexe(0)
Operation Program Data Mode Setting Help
Stop
Halt ESC
End Alt+X
s2pro_ue.ff
S2 Pro Jig mode setting screen
<NOTE>Insert the firmware Smart Media which wants to be
downloaded to the camera when you download the firmware.
(1) Mount the adjustment lens on the S2Pro.
(2) Set the focusing ring on the adjustment lens to infinity.
(3) Set the aperture ring on the adjustment lens to F5.6.
(4) Load 2 fully charged CR123A batteries into the camera.
(5) Set the mode dial to M mode.
(6) Set the focusing mode switch to MF.
(7) Open the slot cover.
(8) Connect the USB cable to the camera.
(9) Supply 5.00 volts to the camera from the power cable jig.
(10) Hold down the BACK button and switch the camera on.
When you have completed the preparation in steps
(1) to (10), press the [Enter] key on your computer.
OK=0 NG=0(0.00%) 6.07sec NGSTOP F Operating

<Fig.51> Jig Mode Setup Screen

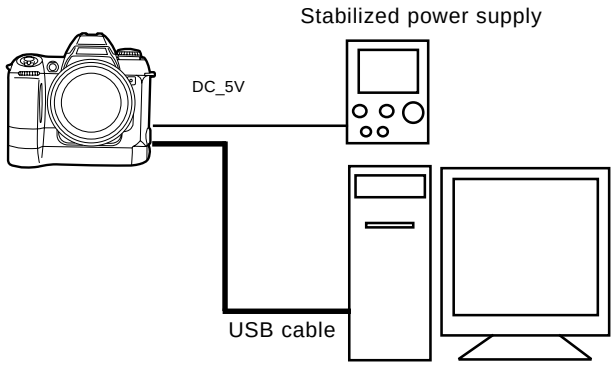
4-19.Specifying the CAMERA BODY Setting When Requesting Nikon Repairs

[Preparation]
No special jig is required.

[Environment for adjustment]
Refer to the "Connection chart for Nikon repair request settings" figure shown at right.

[Notes]
1) If the camera body is faulty and repairs by Nikon are being requested, exit this setting.
2) If this setting is mistakenly specified, complete the adjustments for camera body replacement.

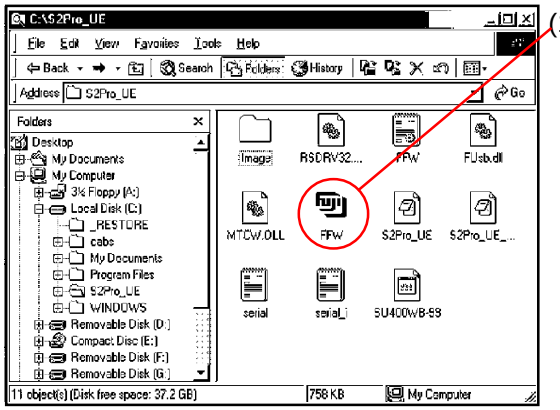
* This setting procedure resets the AF adjustment data and flash adjustment data in the EEPROM installed on the camera body (by Nikon).



Connections for Downloading Firmware

<Step 1>
Double-click the executable file in the adjustment software (FFW.exe). (Fig.52-(1))

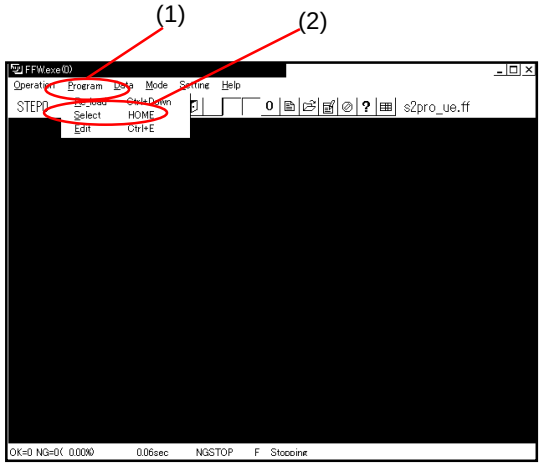
--> The **"FFW.EXE Startup"** window (Fig.53) appears.



<Fig.52> Windows Explorer screen of FFW.exe

<Step 2>
In the "FFWJ.EXE Startup" window (Fig.53) menu bar, select "Program" (Fig.53-(1)) and then "Select" (Fig.53-(2)).

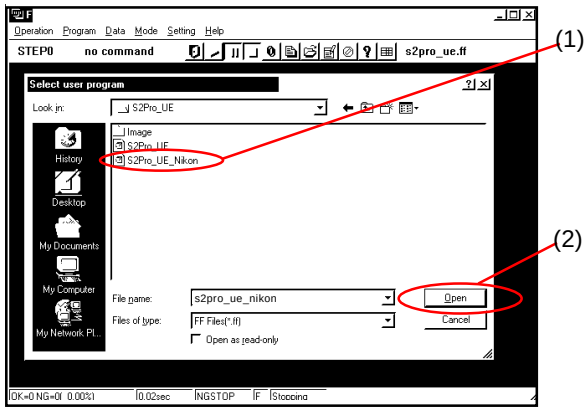
--> The **"Select user program"** window appears (figure 54).



<Fig.53> FFW.EXE Startup Screen

<Step 3>
Select "S2Pro_UE_Nikon.ff" (Fig.54-(1)) in the "Select user program" window (Fig.54) and click "Open" (Fig.54-(2)).

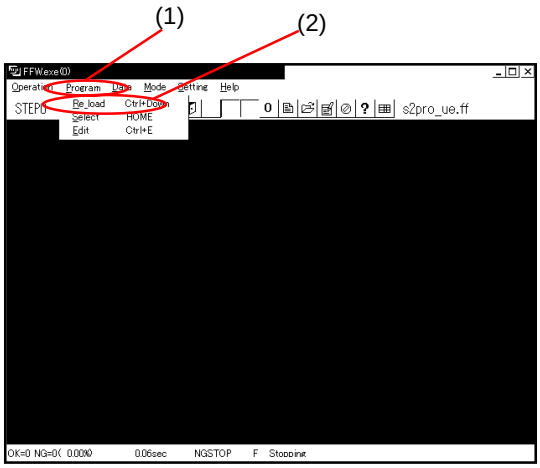
--> The **"FFW.EXE Startup"** window (Fig.55) appears.



<Fig.54> Select user program Screen

<Step 4>
In the "FFWJ.EXE Startup" window (Fig.55) menu bar, select "Program" (Fig.55-(1)) and then "Re_road" (Fig.55-(2)).

--> The **"Reload confirmation"** window (Fig.56) appears.

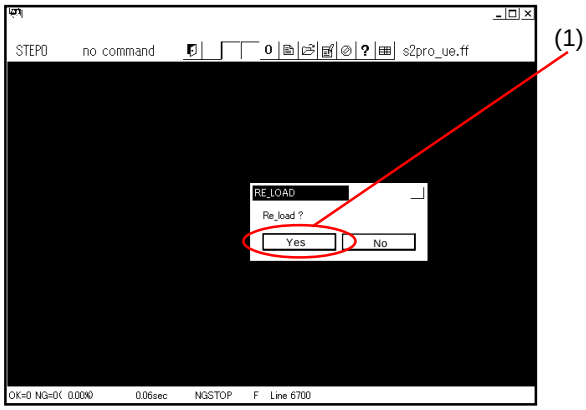


<Fig.55> FFW.EXE Startup Screen

<Step 5>
In the "Reload confirmation" window (Fig.56), click "Yes" (Fig56-(1)).

--> The **"FFWJ.EXE Startup"** window (Fig 57) appears.

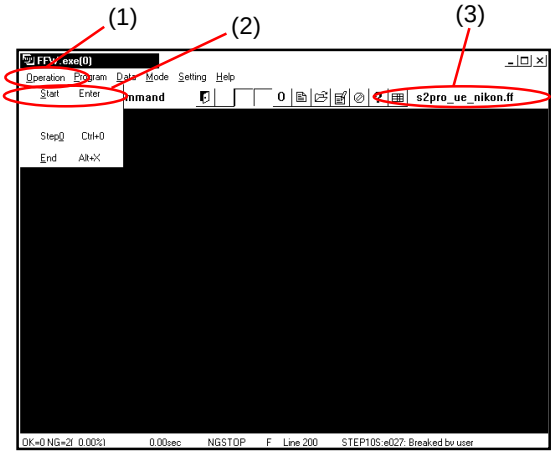
* Confirm the thing that s2pro_UE_nikon.ff is displayed to **"Fig.57-(3)".**



<Fig.56> Reload confirmation Screen

<Step 6>
In the "FFW.EXE Startup" window (Fig.57) menu bar, select **"Operation"** (Fig.57-(1)) and then **"Start"** (Fig.57-(2)).

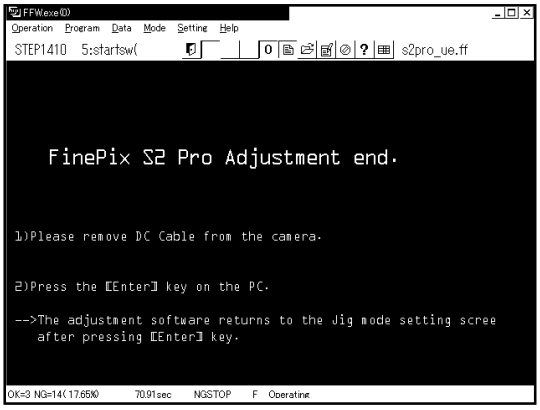
--> The **[Nikon repair request settings Screen(Fig.58)]** is displayed.



<Fig.57> FFW.EXE Startup Screen

<Step 7>
Set the camera to Nikon repair request settings and then press the [Enter] key on your computer.
* Nikon repair request settings procedure
(1) Load 2 fully charged CR123A batteries into the camera.
(2) Set the mode dial to M mode.
(3) Supply 5.00 volts to the camera from the power supply jig cable.
(4) Set the power switch to ON.
(5) Press the "MENU/OK" button to display the SET-UP screen.
(6) Set the PC mode for 1394 photography and press the "MENU/OK" button.
(7) Open the slot cover.
(8) Switch the power off.
(9) Connect the USB cable to the camera.
(10) Hold down the BACK button and switch the camera on.
(11) When you have completed steps (1) to (10) above, press the [Enter] key on your computer.

--> The **[Nikon repair request settings Compiete Screen (Fig.59)]** is displayed.

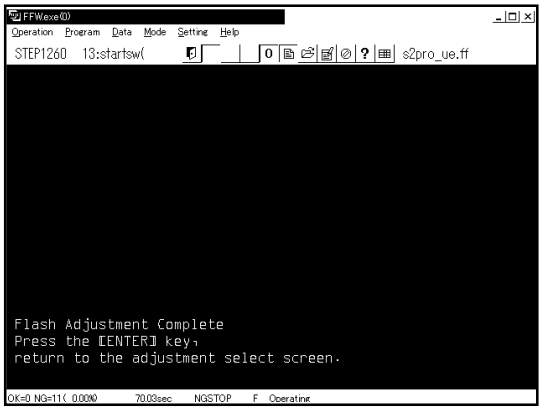


<Fig.58> Nikon repair request settings Screen

<Step 8>
Press the [Enter] key on the computer while in the [Nikon repair request settings Compiete Screen (Fig.59)].

--> This completes the Nikon repair request settings. Disassemble the camera and request repairs by Nikon.

[IMPORTANT NOTE]
To switch from this setting to the normal adjustment settings, switch the user program to "S2Pro_UE.ff".
To switch user programs, select and reload the "S2Pro_UE.ff" program and then use the user program selection window (Fig.54), and, execute Step5 from Step3.



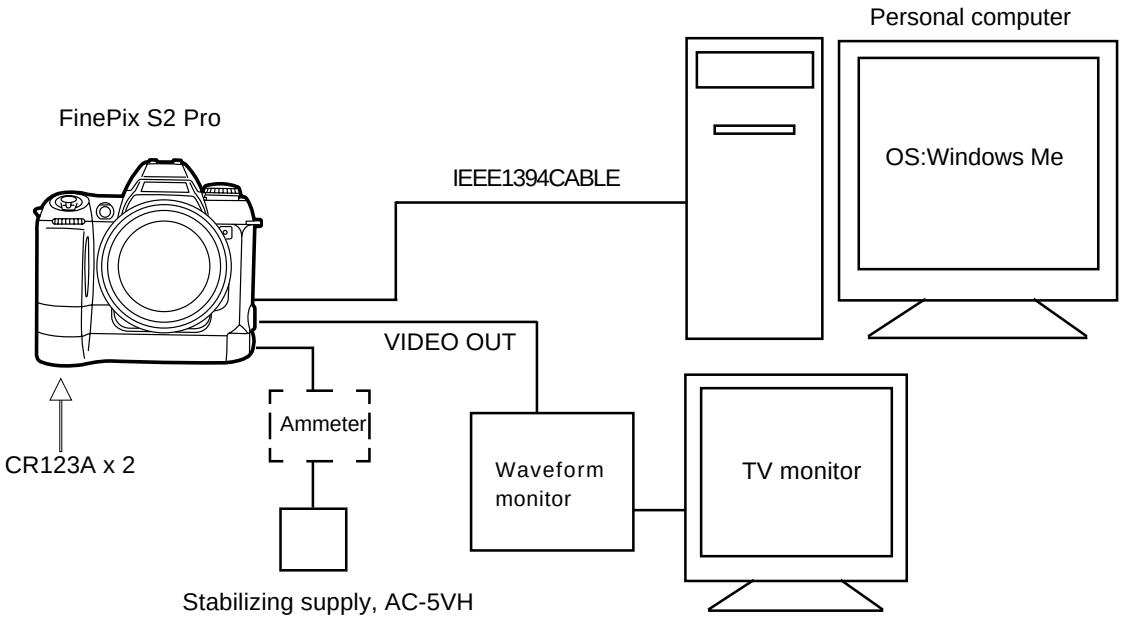
<Fig.59> Nikon repair request settings Compiete Screen

5.Inspection

5-1. Measuring Instruments and Jigs Used for Inspection

Measuring instrument	Remarks
TV monitor	NTSC TV monitor, minimum resolution 600 lines
Power supply	AC adapter (eg AC-5VH), stabilized power supply
Pattern box	PTB450 or equivalent
Waveform monitor	LEADER: 5870 or equivalent
Digital voltmeter	For general use
Luminance meter	LS-110 (Minolta) or equivalent
Color thermometer	Color Meter IIIF (Minolta) or equivalent
Ammeter	For general use (able to measure up to 1mA)
Replacement Lens for Inspection	Common with adjustment jig: ZJ00396-100
Power cable jig	Common with adjustment jig: ZJ00213-100
Grey chart	Common with adjustment jig: ZJ00254-100
LB140 filter	Common with adjustment jig: ZJ00006-100
High-resolution chart	Common with FinePixS1Pro, FinePix4700Z: ZJ00398-100

5-2. Connection of Measuring Instruments for Inspection



5-3. Inspection and Settings at Shipment

<Step 1>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Visual check	------	Visual check of camera.	• No significant dents in body. • Click sound of all switches, and operation of sliders, normal. • No significant foreign matter, or cloudiness, in viewfinder. • Flash mechanism opens and closes smoothly.	------	------

<Step 2>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Power switch check Power supply confirmation from DSC side to camera	P Mode	(1) Insert the Jig cable in DC_JACK. (2) Set power supply voltage. (3) Install the lens for the inspection. (4) Insert the SmartMedia which can be recorded. (5) Thing that display by which date setting is urged appears. (6) Push the BACK button. (7) Turn on "Illuminator button" and turn off.	(2) 6.00+-0.5V (5) Confirm there is no garbage no dirt.(Top display panel, Rear display panel, LCD monitor) (7) Thing which lights LED back light of Top display panel and Rear display panel, and is turned off.	Visual	Top display panel LCD monitor Rear display panel

<Step 3>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measuremen point
IEEE1394 device recognition confirmation	P Mode	(1)Connect the IEEE1394 cable with PC. (2)Stop the device connection of PC, and pull out the IEEE1394 cable from the camera. (3)Switch power OFF.	(1)Thing that "1394 SHOOTING" is displayed in Rear display panel, and camera is recognized as external drive on PC. (2)The any error does not appear in PC. (3)The any "1394 SHOOTING" is displayed in Rear display panel, and camera is recognized as external drive on PC.	Visual PC IEEE1394 cable	Rear display panel

<Step 4>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Flash Photograph check image	A mode Focus "M" mode	(1)Insert CR123A x 2 in the camera. (2)Change to A mode. (3)Set to ISO sensitivity 200. (4)Set aperture to F5.6. (5)Set number of recorded pixels to 3024 (others to defaults). (6)Set as for flash adjustment. (7)Take photograph.	(6)See Setup for Flash Adjustment diagram. (7)Recorded on SmartMedia.	Gray chart	

<Step 5>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Long time exposure Photograph check image	M mode	(1)Do the lens cap. (=Shade.) (2)Change to A mode. (3)Set to ISO sensitivity 1600. (4)Set aperture to F5.6. (5)Adjust the shutter speed to ten seconds. (6)Set to the AF mode M. (7)Take photograph.	(7)Recorded on SmartMedia.		

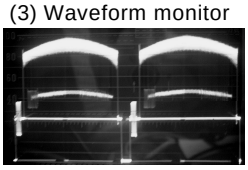
<Step 6>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measuremen point
Confirmation of operation of External flash.	P Mode	(1)Change to P Mode. (2)Set the tester's + probe on the flash hot shoe X contacts and the tester's - probe on the flash hot shoe GND contact. (The resistance value at this time should be = inf) Pop down the flash and take a photograph. (3)Take photograph.	(3)Thing which does decrease change by resistance momentarily, and returns to origin immediately.		tester

<Step 7>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrumen	Measurement point
Slot cover detection confirmation		(1)Turn on the Power_on of the main body. (2)Open and tighten the slot cover.	(2)The any Rear display panel disappears.	Visual	

<Step 8>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measuremen point
Check play-back image (Flash / Expo-sure for a long time)	PLAY Mode	(1)Place the smart media which contains the photograph re-corded in STEP4 and 5 in image check camera. (2)The PLAY button is pushed. (3)Playback flash check photo-graphic image. (4)Playback Exposure for a long time photographic image.	(3)Playback image within 48+22,-17 [IRE] on waveform monitor display. (4)That is, no white floating in image.	Check cam-era Waveform monitor TV monitor (3) Waveform monitor 	tester

<Step 9>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrumen	Measurement point
Confirming the operation of alkaline battery		(1)The DC_IN cable is pulled out, and the alkaline battery (4) is put in BATT CART. (2)The power on.	(2)The any which LCD monitor displays.		LCD monitor

<Step 10>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Delete mode check	Delete	(1)DC cable jig is inserted in DC_JACK. (2)Reproduce the recording picture image, and push the "MENU" key. (3)Select "FORMAT", and push the "OK" key. (4)Select "MENU/OK", and push the "OK" key.	(2) Playback screen disappears. (3)Thing that “FORMAT OK?" is displayed. (4)Thing that “NO IMAGES" is displayed in LCD monitor.	LCD monitor Recorded smart media	LCD monitor

<Step 11>

☆

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Confirmation of operation of MicroDrive Battery down check(DSC)	PLAY Mode	(1)Replace SmartMedia with the MicroDrive and push the PLAY button. (2)Set the voltage to 5.00V+-0.1V. (3)Lower the voltage to **3.8V+-0.1V** little by little. (PRE_END voltage) (4)Lower the voltage to **3.6V+-0.1V** little by little. (END voltage)	(1)The test image is played by the LCD monitor. (2)Thing of 1[A] or less current. (3)Thing that battery PRE-END display appears (4)The end mark is a thing that the blinking display is done in Rear display panel.	LCD monitor Recorded MicroDrive	LCD monitor

<Step 12>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Built-in flash prohibition confirmation		(1)Remove CR123A (2) from the camera. (2)The power on. (3)Do pop_up. (4)Take a picture.	*When the use language is English (3)The message of "CLOSE Arrow W/O CR-123" is displayed in the Rear display panel.displayed. (4)The warning sound sounds, and, the shutter cannot be cut.	Visual	

<Step 13>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Battery low check (Nikon Body)		(1)Set the voltage to 6.00V+-0.01V. (2)Lower the voltage to **4.30V+-0.3V** little by little.	(2)The blinking display is done by Rear display panel the end mark, and, the display of A disappears the warning sounding and three seconds later.	Stabilized power supply	Rear display panel

<Step 14>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrumen	Measurement point
Leakage current check	Power OFF	(1)Switch power OFF.	(1)Leakage current maximum of **0.5[mA]**.	Stabilized power supply Power cable jig Ammeter	

<Step 15>

Item	Mode	Preparations for adjustment and measurement	Adjustment and measurement method	Measuring instrument	Measurement point
Settings at shipment	(note) Language is English	(1) Run Full Reset from Settings menu to return to defaults. (2) Defaults are as follows. Image display:OFF High mode: TIFF-RGB Media: SmartMedia Test-Shooting(no card): ON Voice memo: OFF Frame no: RENEW PC mode: 1394DOWN LOADING Beep: LOW LCD monitor: ON Language: ENGLISH Date: Not set (3) Mode dial :P *Setting at M mode: Shutter speed:1/125 Aperture:F5.6 *Setting at A mode: Aperture:F5.6 (4) Focus mode :S (5) AE-L/AF-L: Multi pattern (6) ISO sensitivity:200 (7) Diopter adjustment knob: bottom (8) Power switch:Turning off (9) 4-direction switch:Lock (10)Inspection battery/inspection SSFDC not in camera. (11)No contamination on LCD/Optical finder. (12)Clean exterior of camera.	(2) The camera may be set to the mode set at shipment from the factory with the following procedure. 1. Connect the camera to the computer with the USB cable. 2. Open the slot cover. 3. Switch power supply ON (AC adapter may also be used). 4. Switch power ON while pressing the back button. 5. Switch the power supply OFF with the camera POWER button.		
Settings at packaging upgrade		(1) Upgrade packaging in accordance with parts list details.			

5-4.Resolution Checking

<Step 1>
Refer to the settings for resolution checking in the figure at right and set up the camera and the high-resolution chart.
Use a light source to illuminate the high-resolution chart so that the surface brightness of the chart is 9.0 to 11.5 EV.

<Step 2>
Prepare the following:
(1) Insert a formatted 32 MB SSFDC into the camera.
(2) Supply power to the camera. (Batteries can be used.)
(3) Set the camera to "A" mode and switch it on.
(4) Set the camera on a tripod and point it directly at the high-resolution chart (set at 90° horizontally and vertically relative to the chart).
(5) Position the chart so that it is 115+-5 mm from the camera's F mount.

<Step 3>
Make the following changes to the default photography mode settings:
(1) Select A mode.
(2) Select "Fine" (4256 x 2848) mode.
(3) Set the flash to OFF.
(4) Set the aperture to F4.0.
(5) Select ISO 200.
(6) Set the focusing mode to "S".

<Step 4>
After you have completed the settings in steps 1 to 3 above, align the center of the viewfinder screen with the center of the high-resolution chart (Fig.60-(1)) and press the shutter button taking care to avoid any camera shake.

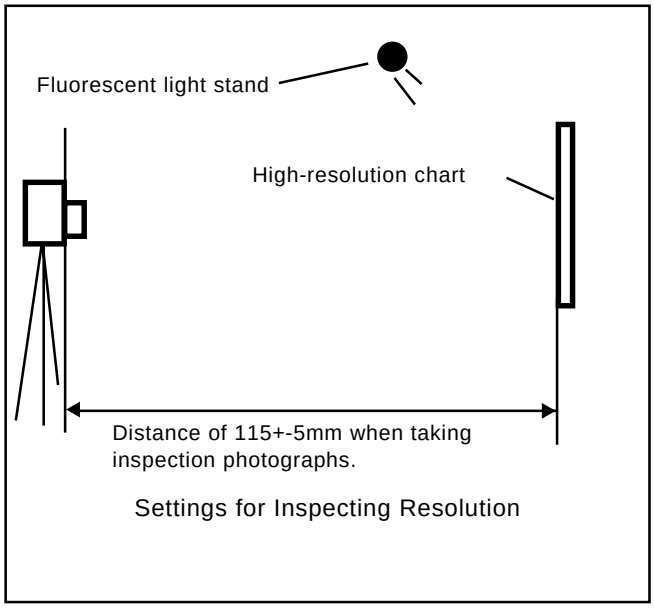
--> A resolution checking image (Fig.60) is recorded.

<Step 5>
Download the resolution checking image to your computer.

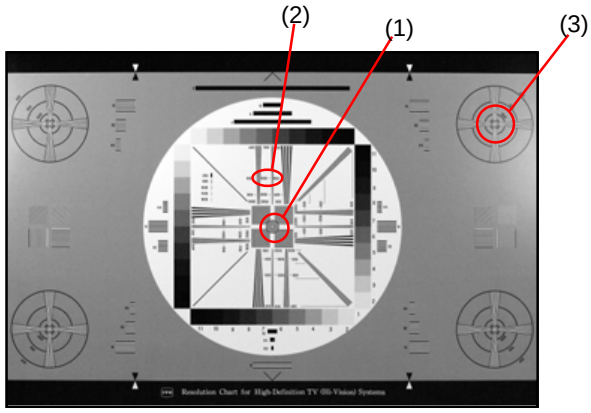
<Step 6>
Resolution checking image enlargement procedure (Fig.60-(2))
(1) Open the image in Photoshop 5.0.
(2) Display the image as shown in Fig. 61.
The procedure varies depending on your software settings.
(3) Use the zooming tool in the tool box (61-(1)) to enlarge the area shown in 60-(2) to 300%.
(4) When you enlarge the image, the centrally enlarged image (Fig.62) appears.
The centrally enlarged image (figure 62-(1)) is normal if a resolution of 1200 lines can be confirmed.
Use the same procedure to check the resolution of peripherally enlarged versions (figure 63-(1)) of the resolution checking image (figure 60-(3)). The peripherally enlarged image is normal if a resolution of 1000 lines can be confirmed.

Check location	**Service resolution value**
Center (horizontal/vertical)	**1200**
Peripheral (horizontal/vertical)	**1000**

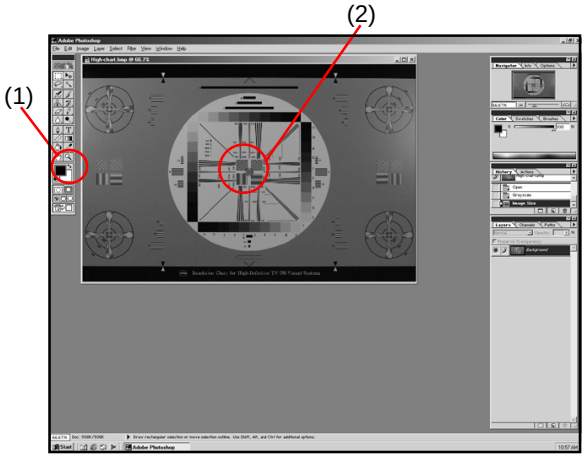
[Note!]
The resolution values given in this description are not the original "FinePix S2 Pro) resolution values (TV resolution). The values given are according to the high-resolution chart set in the jig. Accordingly, the values shown in the above table are for servicing purposes and should be confirmed as being for use in in-house inspections.



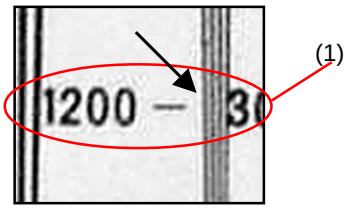
Settings for Inspecting Resolution



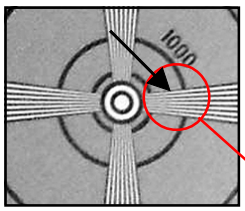
<Fig.60> Resolution Check Image



<Fig.61> Enlargement Using Photoshop



<Fig.62> Enlargement to 300%(Center)



<Fig.63> Enlargement to 300%(Peripheral)

5-5.CCD Cleaning and Inspection Procedures

This camera is fitted with a CCD as its imaging (pickup) element. The CCD is located behind the shutter. Dust or other soiling may stick to the CCD and, depending on the photography settings and the type of subject, may be visible in photographed images if it is not cleaned off. If this occurs, the CCD needs to be cleaned.
[Note]
Always use the AC power adapter when performing this task. Loss of power during cleaning could cause the mirror to drop or the shutter to close, risking damage to the camera.

5-5-1.CCD Cleaning Using a Visual Inspection for Dusting

<Step 1>
Check that the camera is switched off and remove the lithium batteries.

<Step 2>
Connect the AC power adapter to the camera.

<Step 3>
Remove the interchangeable lens from the camera.

<Step 4>
Set the camera's exposure mode dial to "M".

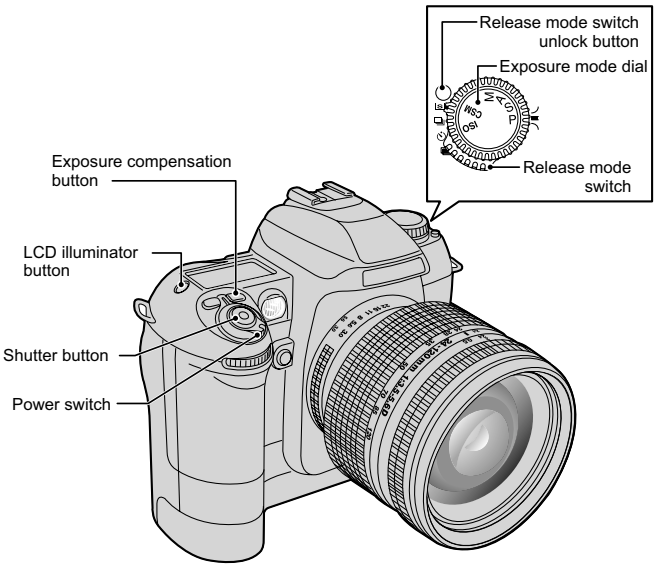
<Step 5>
Hold down the release mode switch lock release button and set the release mode switch to "S1 Frame".

<Step 6>
Hold down the Synchro mode and Illuminator buttons and switch the camera on.

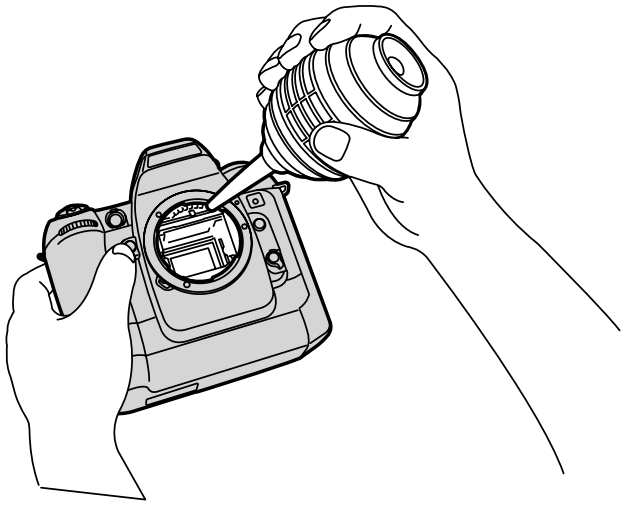
<Step 7>
When you press the shutter button, the mirror stays up and the shutter stays open.

<Step 8>
Hold the camera so that light shines on the CCD (OLPF) and check for soiling on the CCD surface either visually or using a stereoscopic microscope. If soiling is found, use a blower to remove it (*1).
If the soiling cannot be removed using the blower, wipe the CCD with a lens cleaner or lint-free cloth and EE cleaner or ethanol (95% or higher).
Do not use a blower with a brush attached. Using a blower-brush to clean the CCD can scratch the CCD surface.

[Note]
When using a lens cleaner to wipe the CCD, note that any metallic residue on the CCD (OLPF) surface will cause scratches in the CCD surface during cleaning.



<Fig.64> Various button charts



<Fig.65>Appearance of blower cleaning

5-5-2.CCD Cleaning Using Test Photography to Detect Dusting

<Step 1>
Supply power to the camera. (AC power adapter of batteries can be used.)

<step 2>
Mount an inspection lens on the camera and set the camera up as described below.
[Camera settings]
(1) Set the camera's exposure mode dial to "A".
(2) Set the focusing ring on the lens to infinity (\).
(3) Set the lens aperture to the smallest aperture size.
(If this is not set, the aperture cannot be specified on the camera.)
Set the camera aperture to F16
(4) Set the number of recorded pixels to 3040 x 2016.
(5) Set the compression rate to Normal.
(6) Set the ISO sensitivity to 200
(7) Set the white balance to Incandescent lamp.

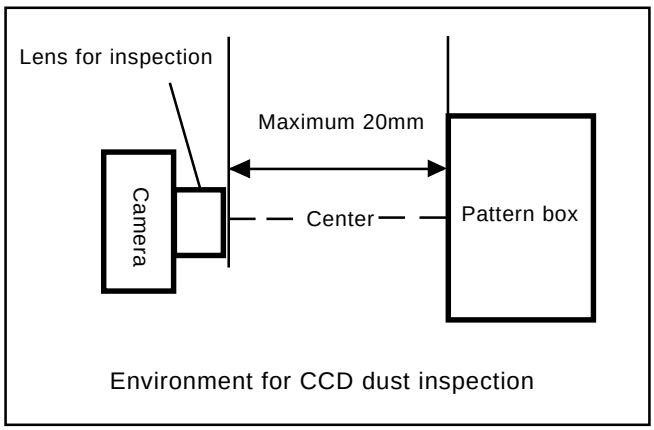
<Step 3>
Take a picture of the white screen shown at right and record the image on an SSFDC.
--> A CCD dust check image (figure 66) is recorded.

<Step 4>
Open the image on your computer using Photoshop and measure the size of any soiling.
The selection tool for the enlarged CCD dusting check image (figure 67) is useful for checking individual pixels.

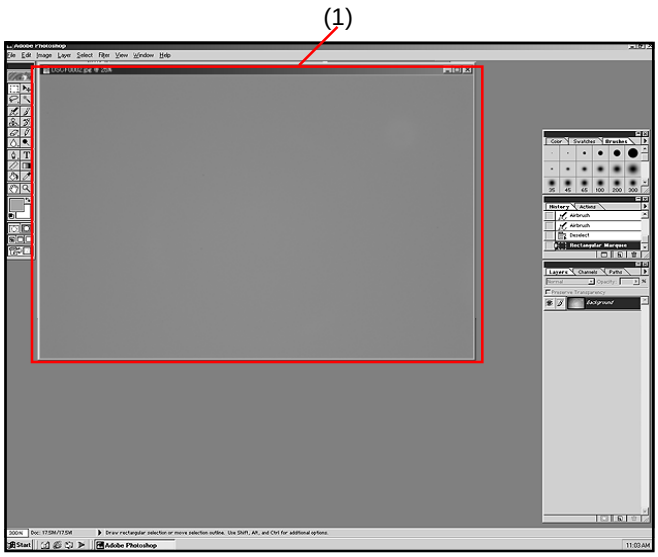
<Step 5>
If the dusting is 12 pixels or larger, it can be regarded as CCD (OLPF) dusting and the CCD should be cleaned again. (At shipment from the factory, soiling smaller than 12 pixels is regarded as OK.)

[Note]
In a normal environment, there will be considerable dusting of the CCD (OLPF) surface. Consequently, there is a possibility that the CCD of a cleaned camera will again become dusted when used by the customer and a request for re-cleaning or some other claim may be made.
Accordingly, to reduce the likelihood of such returns or claims to a minimum, images should be printed before and after cleaning (*1) so that these can be passed on to the customer if necessary.

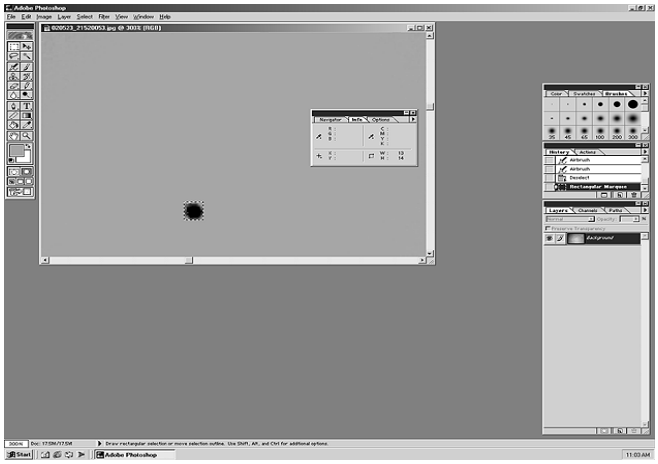
(*1)Take a picture before and after cleaning and print the images on a printer such as a consumer-model TA printer.
(dusting can readily be seen even on prints produced by a TA printer.)



Environment for CCD dust inspection



<Fig.66>CCD dust confirmation image



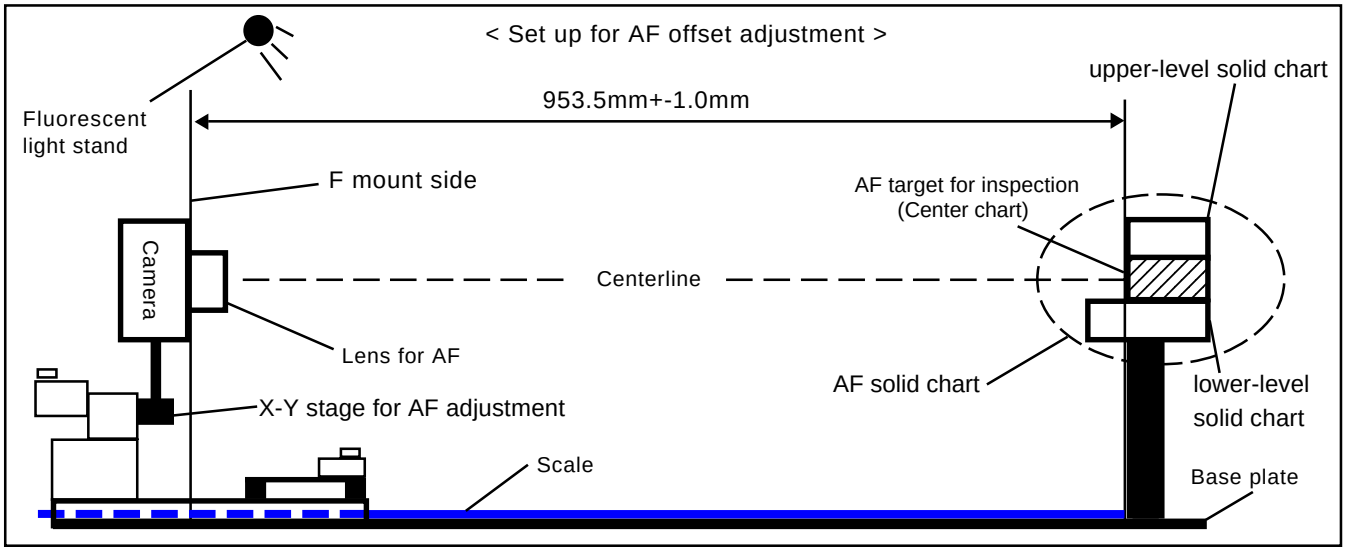
<Fig.67>CCD dust expansion confirmation image

5-6.AF Checking

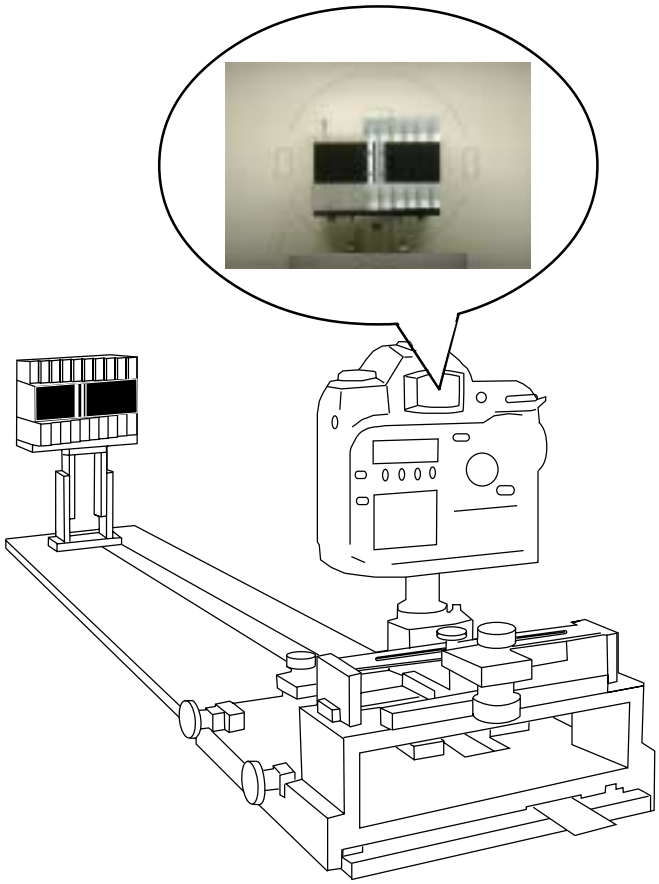
5-6-1. Measuring equipment and tools used for AF checking

Measuring instrument	Remarks
Power supply	AC adapter (eg AC-5VH), stabilized power supply
AF inspection lens of FinePix S2 Pro	New jig: **ZJ00654-100**
AF target for inspection	New jig: **ZJ00626-100**
X-Y stage for AF adjustment	FinePixM603 and commonness: ZJ00611-100
Power cable jig	Common with adjustment jig: ZJ00213-100
Scale (1000mm)	Goods on the market

5-6-2. Settings for the measuring equipment and tools used for AF checking



<Step 1>
Take out the camera stand for the AF Solid chart and set the X-Y stage for AF adjustment on the base plate.
<Step 2>
Mount the camera on the X-Y stage for AF adjustment.
<Step 3>
Remove the hexagonal bolt in the top of the AF solid chart block and remove the upper-level solid chart.
<Step 4>
Align the AF intermediate chart surface horizontally and vertically with the “0” markings on the lower-level and upper-level solid charts and then tighten the hexagonal bolt (long type) provided with the AF intermediate chart.
<Step 5>
Check that there is no tilt or instability in the AF solid chart block.
<Step 6>
Set the scale on the base plate and adjust the position so that the distance between the AF intermediate chart and the F mount on the camera is 953.5 ±1.0 mm.
<Step 7>
Attach the checking lens on the camera and switch the camera on.
<Step 8>
Adjust the X-Y stage so that the center of the AF intermediate chart appears in the AF target (center) in the viewfinder.



5-6-3.AF testing procedure

<Step 1>

Select the settings listed below on the camera:
* Perform a 2-button reset.
(1) Select A mode.
(2) Do not pop up the flash.
(3) Set the focusing mode to “S”.
(4) Select Camera Shooting mode.
(5) Connect the camera to a PC using the IEEE 1394 cable.
(6) Switch the camera on.

-> The shooting software starts up.
* The shooting software startup procedure is the same as for AF adjustment.

<Step 2>
Specify the shooting software settings.
(1) Select 4256 x 2848 Fine mode.
(2) Set the aperture to F1.4.
(3) Select ISO 200.
(4) Create a folder to be used for saving files and transfer the files.
(5) When you have completed the settings, click “Apply”.

-> The camera is now ready to shoot.

<Step 3>
Manually set the focusing ring on the checking lens to the nearest distance and click the “Shoot” button in the shooting software.

-> A preview image is displayed and then transferred to the specified folder.

<Step 4>
Repeat step 3 three times.

-> 3 near-focus shots are saved.

<Step 5>
Manually set the focusing ring on the checking lens to INF (the furthest distance) and click the “Shoot” button in the shooting software.

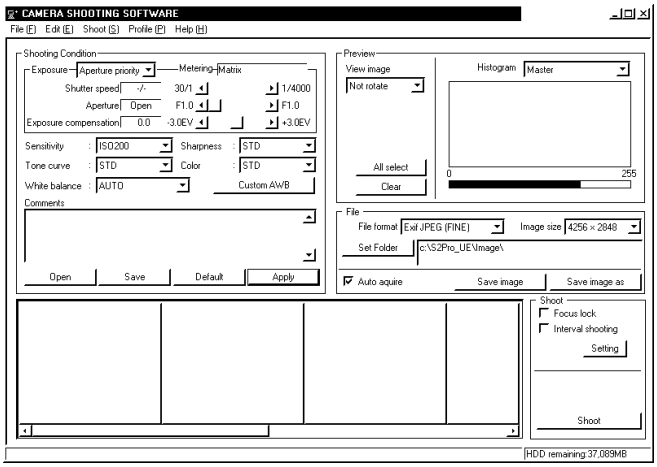
-> A preview image is displayed and then transferred to the specified folder.

<Step 6>
Repeat step 5 3 times.

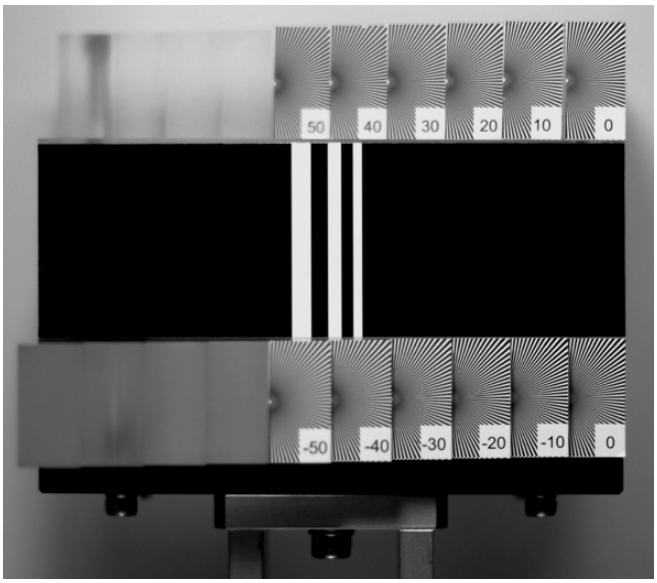
-> 3 far-focus shots are saved.

<Step 7>
Open the 6 shots taken above in Photoshop and note down the sections in each shot that are most clearly focused. Then calculate the average.

<Step 8>
If the average value for the focused sections as confirmed in step 7 is between -50 and 50, the AF performance for the camera is normal.



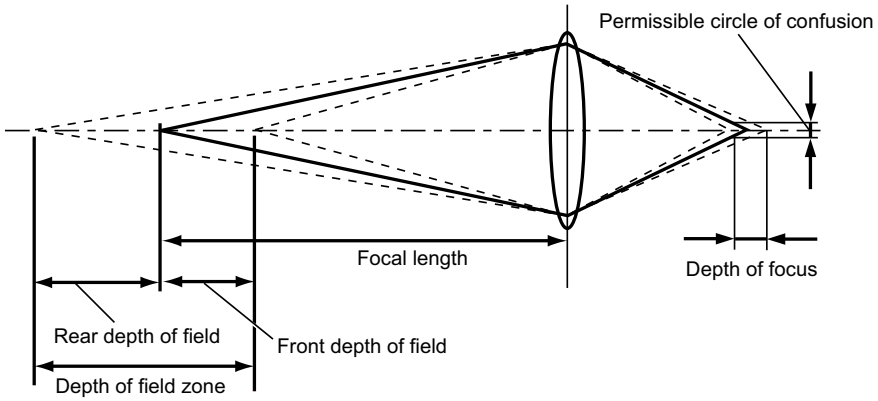
Set screen of camera shooting software



Photographic image sample

5-6-4. Cause identification procedure for focus-related problems

With the FinePixS2Pro, queries and complaints regarding focusing and auto focusing (AF) address a wide range of overlapping factors. These factors include the shallow depth of field for the subject due to the increased resolution of the CCD (the permissible circle of confusion (see figure below) is smaller than that for a conventional camera), the fact that digital images can be viewed enlarged on a PC, the differences in the way images are generated compared with the FinePixS1Pro, lens-related factors and problems that arise due to the way the camera is used. For this reason, methods for differentiating between these various factors are discussed here.



What is the " permissible circle of confusion "?

A lens resolves the image of a subject located on the optical axis on the image plane. But we often see that subjects at a range of different distances from the camera, both nearer and further away than the focal distance, are also in focus. This is because when the degree of blurring in a subject is below a set amount, we perceive the subject as being in focus. This set amount is known as the permissible circle of confusion. The range on either side of the image plane within which the amount of blurring is smaller than the permissible circle of confusion is called the depth of focus. Similarly, the subject range for which the image is resolved within the depth of focus is called the depth of field. All subjects within the depth of field for a shot are photographed as if they were in focus.

<Cause identification procedure>

The basic causes underlying detected problems can be broadly grouped into 3 categories, as outlined below.

(1) Problems attributable to how the camera is used

• Resolution setting

-> Can be resolved by selecting a high-quality mode (12M JPEG-Fine, RAW) in the resolution settings.

• Sharpness setting

-> Check the resolution problems in SOFT mode.

• Diffraction when shots are taken using an excessively small aperture*1

-> Check the F-stop setting and try taking the shot with an aperture that is slightly larger than the one causing the problem.

*1 Diffraction refers to the tendency of light to scatter due to its wave-like properties. By reducing the aperture size (stopping down), the proportion of the direct reflection light that is resolved directly onto the CCD surface decreases and the effects of diffraction become noticeable.

• The focusing performance for the focus target deteriorates slightly in all 4 directions (up, down, left and right) when compared with the center of the image because the AF sensors detect light horizontally.

-> The central focus area should be used to focus the shot.

• Camera shake

-> The use of a tripod is recommended.

• Photographing subjects that are difficult to focus

-> As described in the Owner's Manual, use manual focus for objects that are not suited to auto focusing.

(2) Problems attributable to faults in the FinePixS2Pro

• AF adjustment problems in the DSC (AF adjustment defects, CCD HOLDER ASSY looseness, etc.)

-> Perform AF checking and repair the DSC block.

• Problems in the Nikon body (AF function defects, body flange back defects, viewfinder matt screen offset, etc.)

-> Perform AF checking and contact Nikon to request repairs.

(3) Problems attributable to performance limitations or defects in the lens used

Using the checking lens as reference, determine whether the problem is with the lens or with the FinePixS2Pro.

• Lens AF malfunction (cannot be addressed by Fuji)

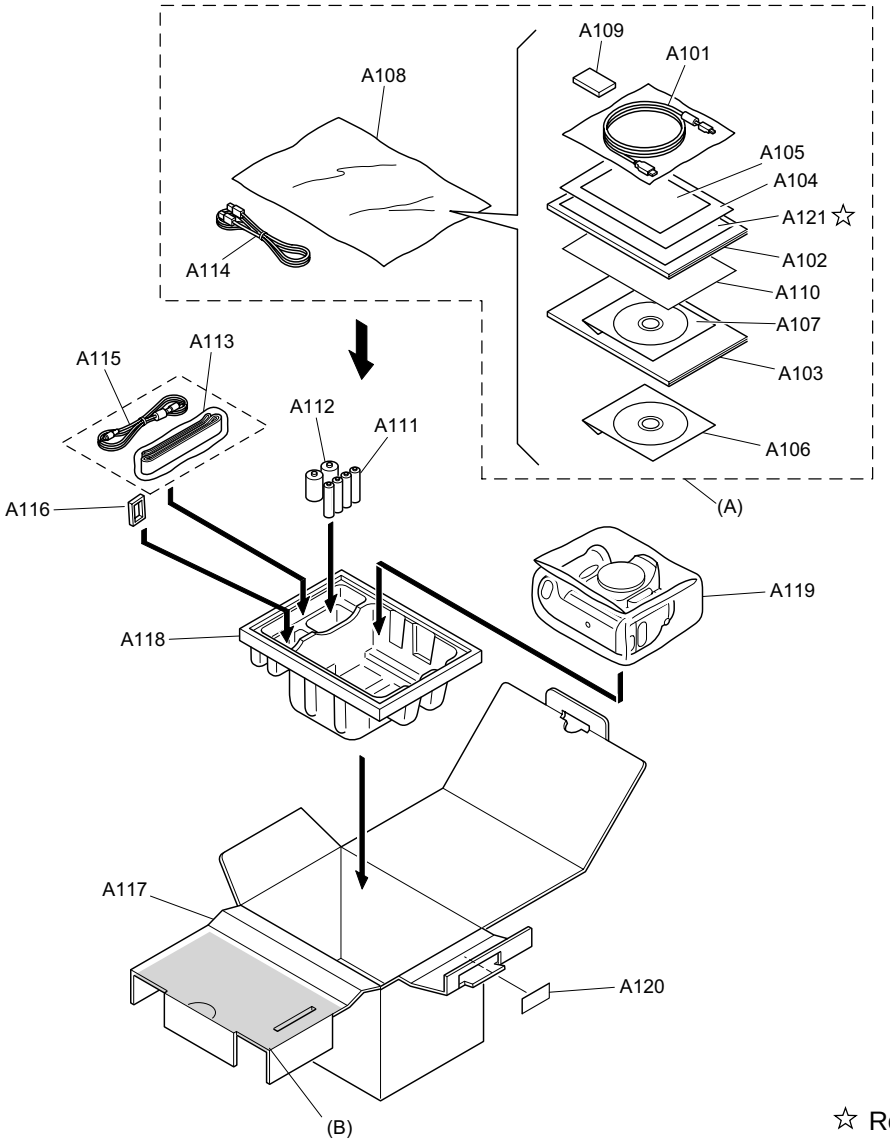
• Lens performance (cannot be addressed by Fuji)

-> Get the lens manufacturer to check the lens being used.

6. Parts List

6-1. U-Model

6-1-1. Packing and Accessories (U)



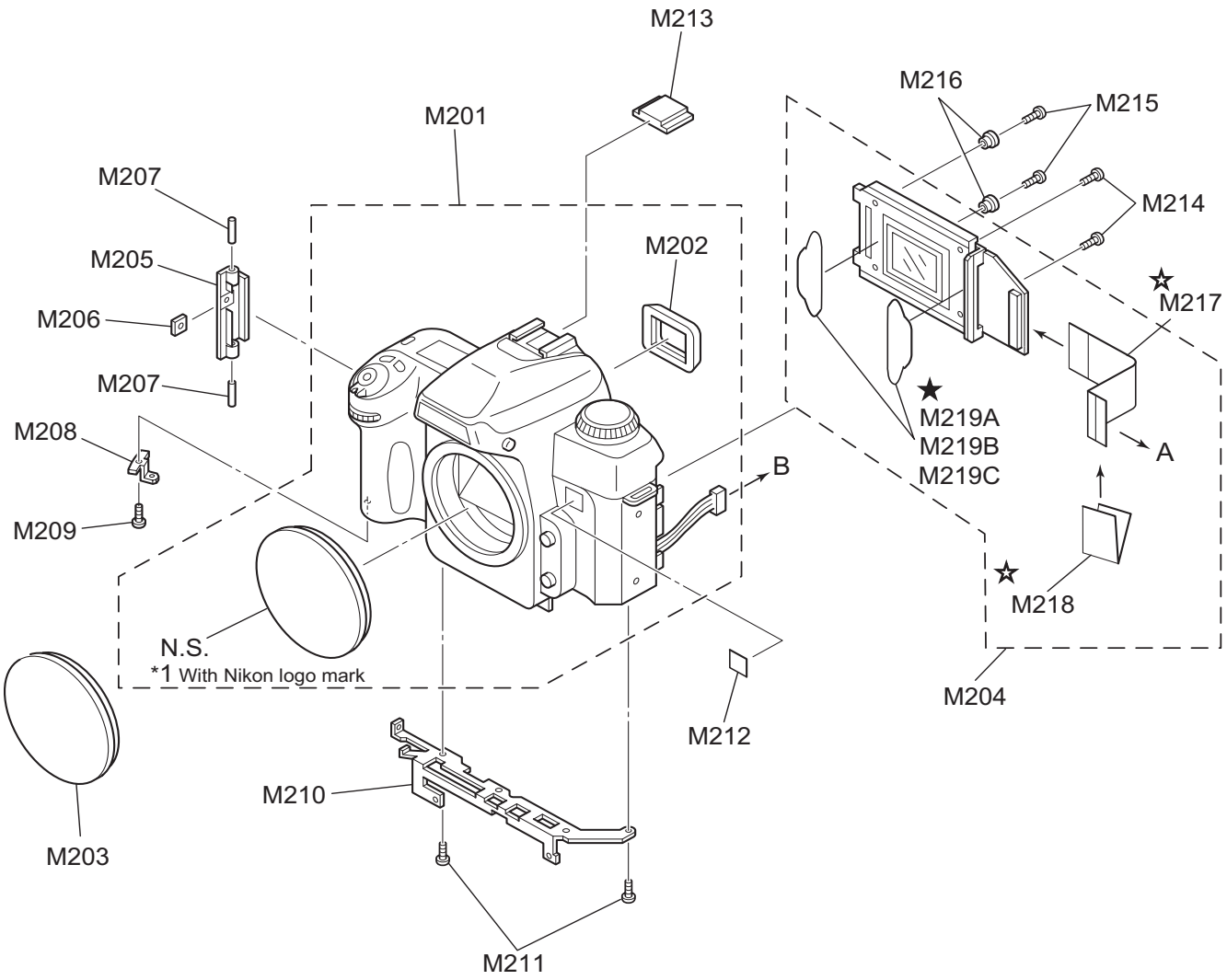
☆ Revised:14.Nov.2002

Ref No.	Parts No.	Description	Common
A101	FZ04205-100	USB CABLE	
A102	BL00140-200	OWNER'S MANUAL	
A103	BL00155-200	I/F MANUAL	
A104	BB07792-101	WARRANTY US	
A105	BB03538-100	IMPORTANT SAFETY	
A106	FZ31400-101	EX3.1 CD-ROM	
A107	FZ31400-200	CD-ROM(PhotoShop_E)	
A108	AZF0000-111	BAG PLASTIC NO.1	
A109	BB13437-100	LCD CAP	
A110	BL00188-200	SOFTWEARGUIDE E	
☆ A121	BL00243-100	LEAFLET	

Ref No.	Parts No.	Description	Common
A111	FZ04793-100	ALKALINE BATTERY	
A112	FZ04089-100	LITIUM BATTERY	(CR123A)
A113	BB11758-100	SHOULDER BELT	
A114	FZ04797-100	IEEE1394 CABLE	
A115	BF02369-100	VIDEO CABLE	
A116	FZ04809-100	EYEPIECE COVER	
A117	FZ04810-100	UNITARY BOX	
A118	FZ04767-100	SHEET MOLD	
A119	AZF0000-321	HDPE BAG NO.12	
A120	BB12943-100	BAR CODE LABEL BLANK	

*Store the (A) part in the dotted line on the reticulation after tucking in UNITARY BOX(B).

6-1-2.CAMERA BODY (U)



☆ Revised:9.Oct.2002
★ Revised:25.Nov.2003
N.S.:Not Supply

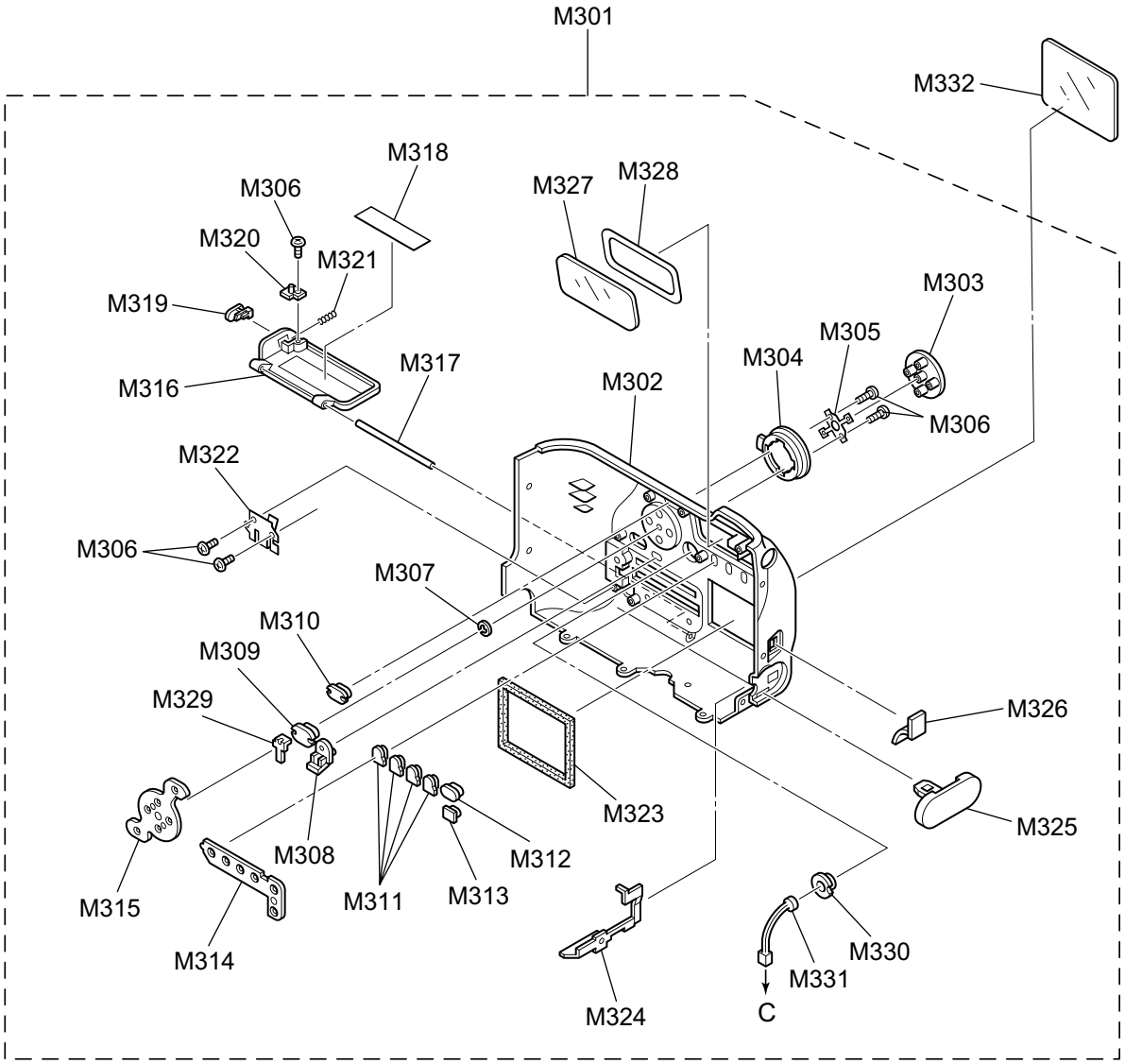
Ref No.	Parts No.	Description	Common
M201	BF04016-100	CAMERA BODY ASSY	
M202	FZ04801-100	RUBBER EYECUP	
M203	FZ04806-100	BODY CAP	
M204	BF04017-100	CCD HOLDER ASSY	
M205	BB13430-100	GRIP BASE	
M206	BB08775-100	M1.7 PLATE NUT	
M207	BB13431-100	SHAFT(GRIP)	
M208	BB13429-100	PLATE GRIP	
M209	ATG1724-0ND	SCREW BT2P17*40B	
M210	BB13428-100	PLATE BOTTOM	

Ref No.	Parts No.	Description	Common
M211	BB14857-100	SCREWM1.7X3.0BNS	
M212	BB10000-200	CCD BADGE S	
M213	FZ04876-100	SHOECAP	
M214	BB11386-100	SCREW M1.2X2.4C	
M215	BB15087-100	SCREW M1.2X5.5C	
M216	BB15088-100	SCREW SPACER	
☆ M217	FZ04775-100	FFC(CCD-MAIN)	
☆ M218	FZ04874-100	BUSTERAID	
★ M219A	BB14628-100	CCD SPACER 3	
★ M219B	BB14628-200	CCD SPACER 2	
★ M219C	BB14628-300	CCD SPACER 1	

*1 BODY CAP attached to CAMERA BODY ASSY delivered as an after parts has the logo of Nikon.Therefore, the thing not distributed to the user.

*2 Never disassemble the inside of CCD HOLDER ASSY.

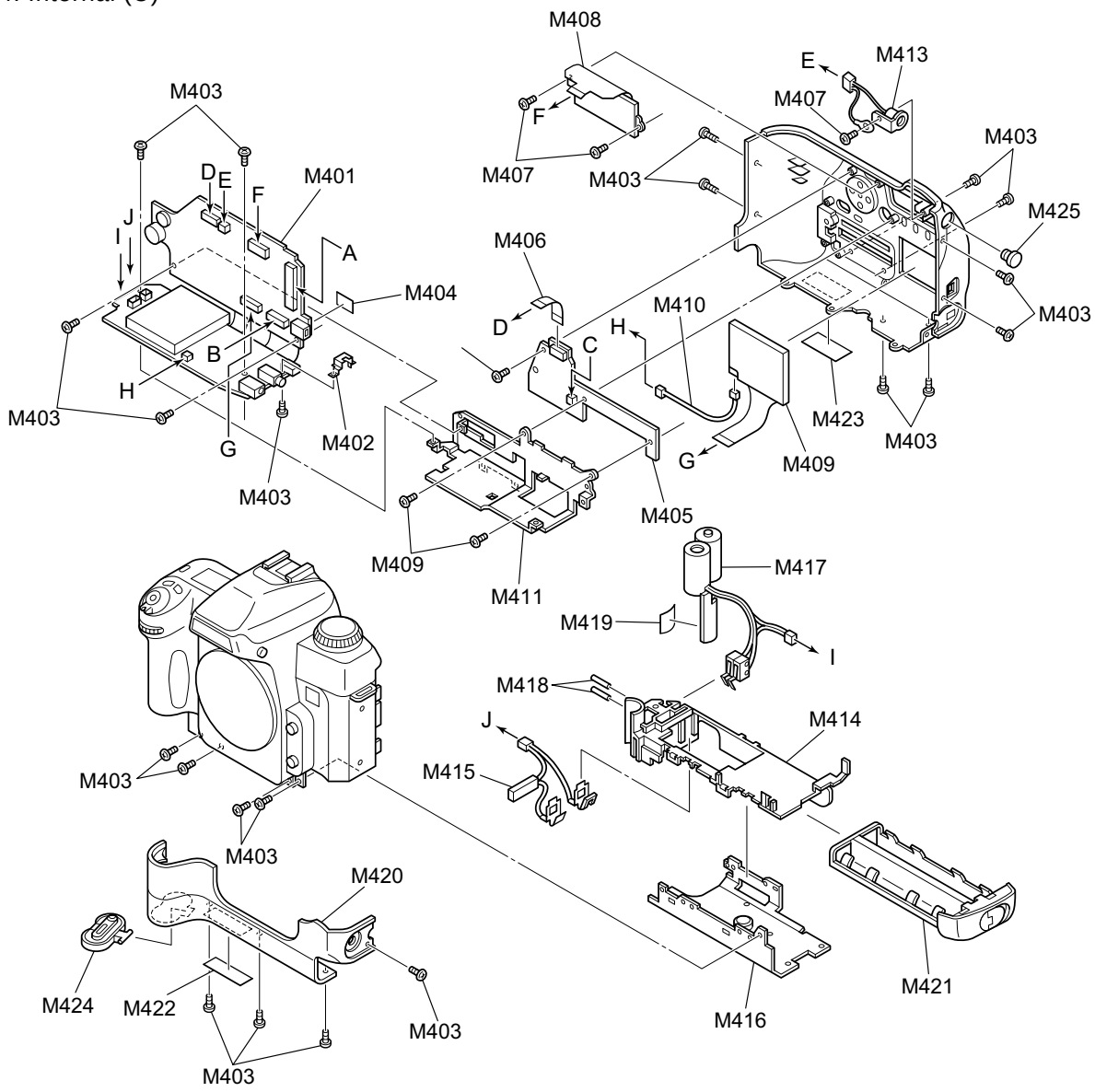
6-1-3. Cabinet R (U)



Ref No.	Parts No.	Description	Common
M301	BU01985-100	R CABI ASSY	
M302	BB13363-100	REAR CABI	
M303	BB13364-100	CURSOR BUTTON	
M304	BB13365-100	C LOCK LEVER	
M305	BB13366-100	CURSOR PSP	
M306	BB13149-100	SCREW BT2P1.7X4.0BC	
M307	ARE2010-CN1	JIS E-RING 2.0	
M308	BB13367-100	LED GUIDE	
M309	BB13368-100	OK BUTTON	
M310	BB13369-100	BACK BUTTON	
M311	BB13370-100	CHANGE BUTTON	
M312	BB13371-100	FUNC BUTTON	
M313	BB13372-100	PLAY BUTTON	
M314	BB13373-100	RUBBER KEY F	
M315	BB13374-100	RUBBER KEY C	
M316	BB13375-100	CARD COVER	
M317	BB13376-100	SHAFT(CARD)	
M318	BB13377-100	LABEL(CARD)	
M319	BB13378-100	CARD KNOB	
M320	BB13379-100	KNOB HOLDER	
M321	BB13380-100	CSP(CARD)	

Ref No.	Parts No.	Description	Common
M322	BB13381-100	CARD PSP	
M323	BB13382-100	LCD CUSHION	
M324	BB13383-100	JACK PLATE	
M325	BB13384-100	JACK COVER	
M326	BB13385-100	1394 COVER	
M327	BB10793-100	DISP WINDOW	
M328	BB11420-100	W FACE TAPE	
M329	BB14120-100	BLIND SHEET	
M330	BB13432-100	MIC GUM	
M331	FZ04771-100	MIC HARNESS ASSY	
M332	BB13433-100	MONITOR WINDOW	

6-1-4. Internal (U)

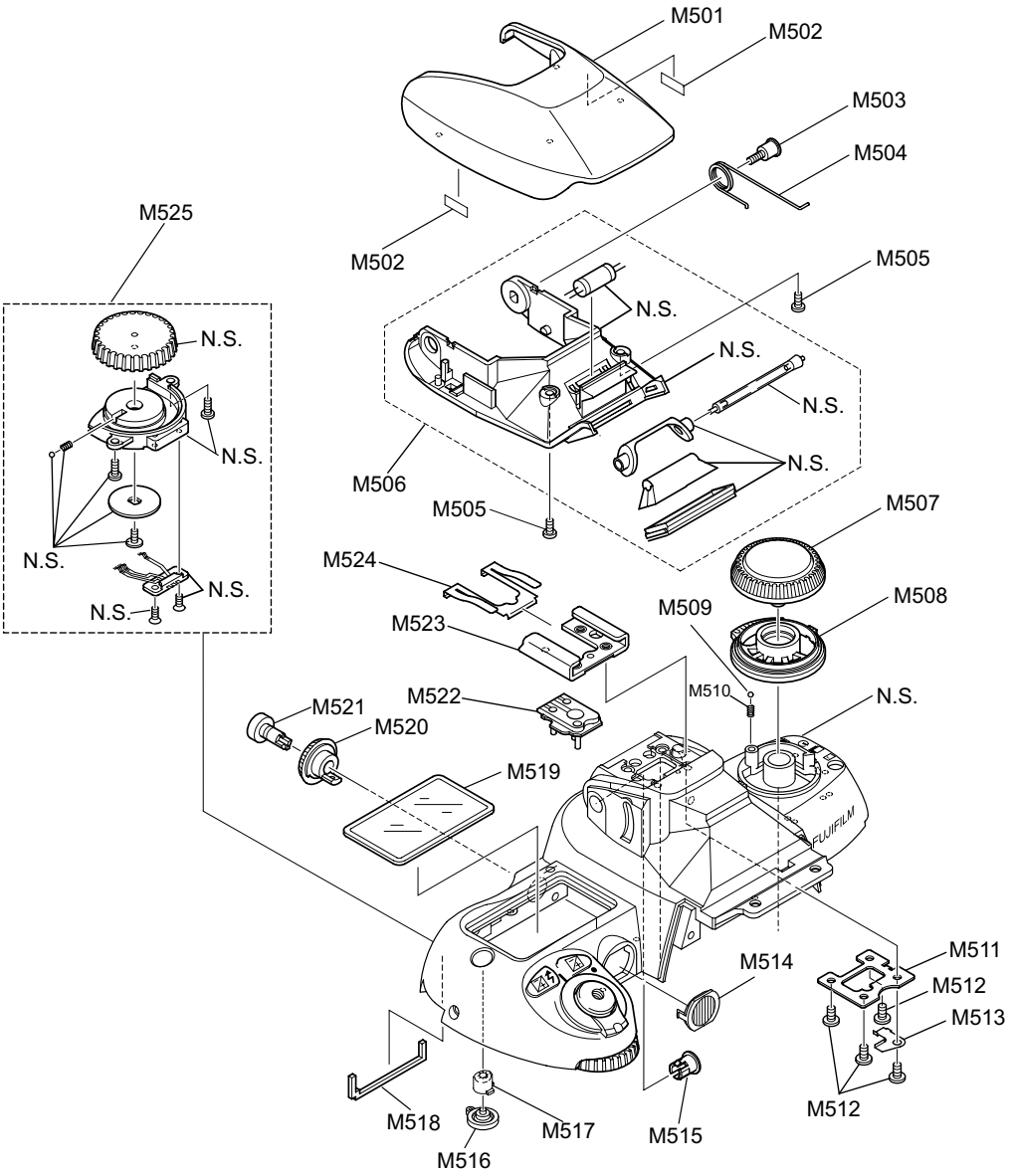


Ref No.	Parts No.	Description	Common
M401	CB0917-A101	MAIN PWB ASSY	
M402	BB11150-100	USB PLATE	
M403	BB14857-100	SCREW M1.7X3.0BNS	
M404	FZ04875-100	BUSTERAID	
M405	CB0919-A100	SW PWB ASSY	
M406	FZ04774-100	FFC(SW-MAIN)	
M407	ATG1724-0ND	SCREW	
M408	FZ03776-100	REAR DISPLAY PANEL	
M409	BF03968-100	LCD MONITOR	
M410	FZ04772-100	LCD MONITOR HARNESS	
M411	BU02655-100	MAIN FRAME ASSY	
M412	BB14857-100	SCREW M1.7X3.0BNS	
M413	BF03999-100	SYNCHRO CONST	
M414	BB13387-100	BATT HOLDER	
M415	BU02563-100	BATT HARNESS ASSY	

Ref No.	Parts No.	Description	Common
M416	BU01989-100	BOTTOM FRAME ASSY	
M417	BU01991-100	CR SPACER ASSY	
M418	BB13390-100	SHAFT(SW)	
M419	BB13393-100	CR LABEL	
M420	BB13386-100	FRONT CABI	
M421	BU01990-100	BATT CART ASSY	
M422	BB09250-200	PL SEAL (U)	
M423	BB13435-201	PRODUCT LABEL	
M424	FZ04805-100	CR BATT COVER	
M425	FZ04807-100	SYNCHRO CAP	

* Build in MAIN PWB ASSY which tries to be replaced detaching M402-M404 when you replace MAIN PWB ASSY.

6-1-5. TOP COVER (1) (U)

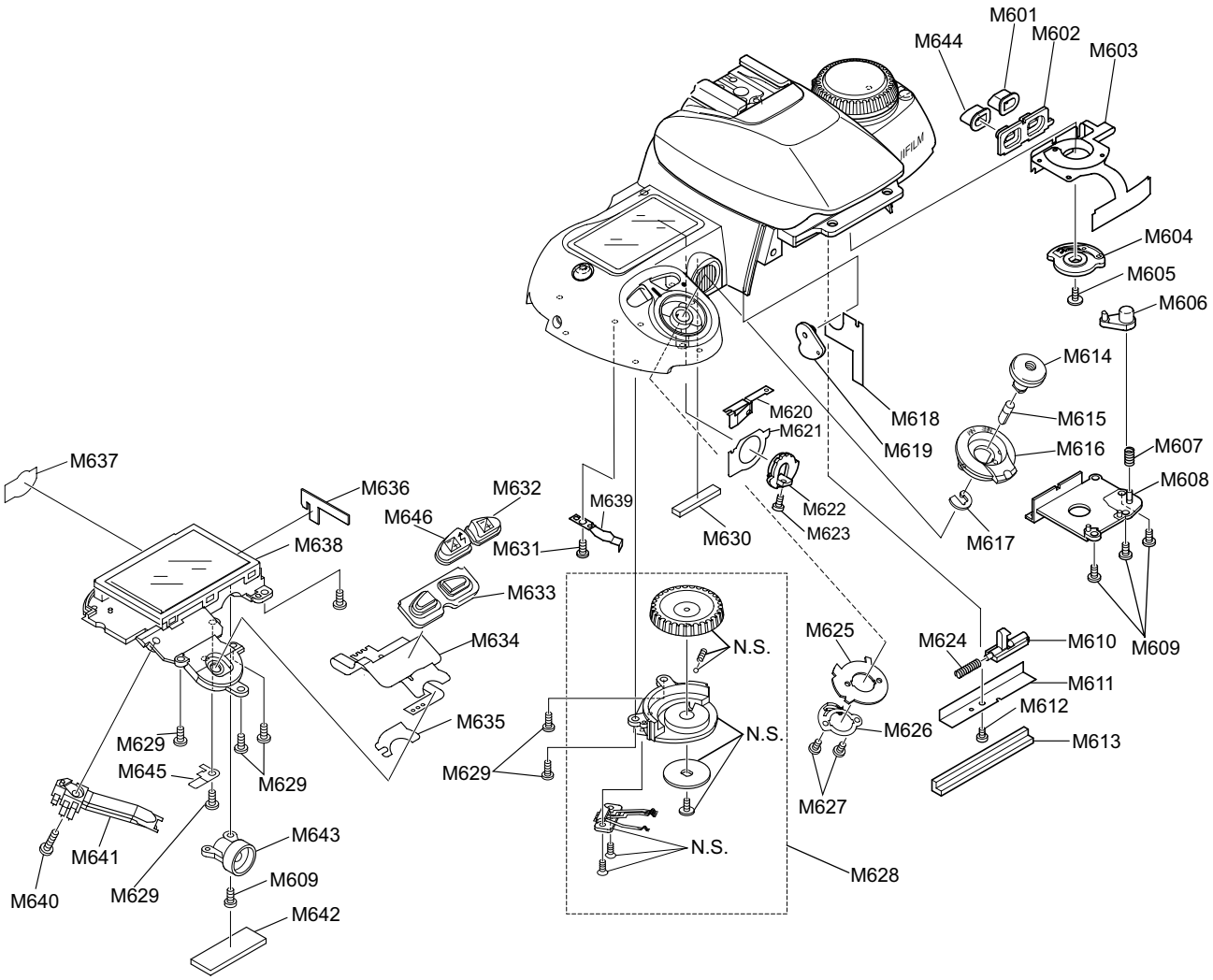


N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M501	1K682-437	SB UPPER CASE	
M502	1K119-308	RUBBER SEAL	
M503	1K010-469	SCREW	
M504	1K230-548	FLASH UP SPRING	
M505	G1-17030FD	SCREW	
M506	1B060-713	SB LOWER CASE UNIT	
M507	1C998-070	MODE DIAL UNIT	
M508	1C998-071	WINDING DIAL UNIT	
M509	1K078-011	CLICK BALL	
M510	1K220-532	MODE DIAL CLICK SPRING	
M511	1S700-355	BACKING PLATE	
M512	1K001-077	SCREW	
M513	1K611-833	LUG PLATE A	
M514	1K682-420	AF ASSIST LAMP COVER	
M515	1K631-102	SB CASE AXLE	

Ref No.	Parts No.	Description	Common
M516	1S758-089	ILLUMINATION RUBBER SW	
M517	1K208-244	ILLUMINATION ON/OFF BUTTON	
M518	1K119-318	DROP PROOF SPONGE	
M519	1C998-042	EXTERNAL LCD WINDOW UNIT	
M520	1K201-143	METERING MODE DIAL	
M521	1K208-246	AE LOCK BUTTON	
M522	1C998-040	SHOE MOLD UNIT	
M523	1K406-032-1	SHOE	
M524	1K240-867	SHOE SPRING	
M525	1C998-043	MAIN C/D BASE UNIT	

6-1-6. TOP COVER (2) (U)

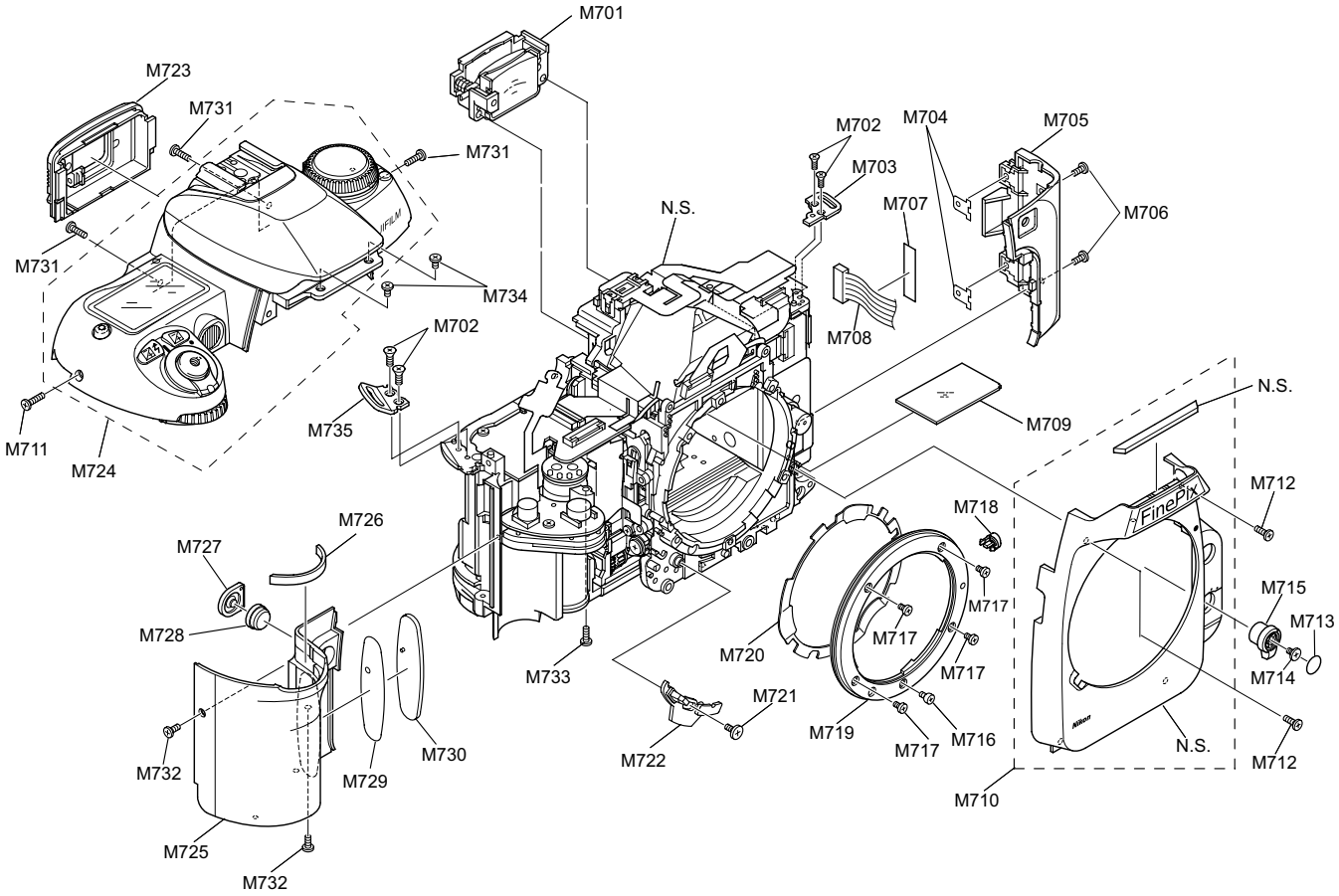


N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M601	1K208-247	REWIND SIDE PUSH BUTTON CAP A	
M602	1S758-090	RUBBER BUTTON	
M603	1S998-502	M/D FPC UNIT	
M604	1C998-048	MODE DIAL SW SPRING UNIT	
M605	1K010-146	SCREW	
M606	1K208-249	WINDING LOCK MOLD	
M607	1K220-496	SPRING	
M608	1K682-427	PLATE	
M609	G1-17030FA	SCREW	
M610	1K682-418	SB LOCK LEVER	
M611	1K612-480	SB LOCK LEVER RETAINER	
M612	G1-14025FD	SCREW	
M613	1K119-327	DROP PROOF SPONGE	
M614	1K208-245	RELEASE BUTTON	
M615	1K682-423	RELEASE BUTTON SLEEVE	
M616	1K206-171	POWER DIAL	
M617	1K060-054	E-RING	
M618	1S998-506	SB UP FPC UNIT	
M619	1C998-038	SB UP SWITCH UNIT	
M620	1K241-313	METERING MODE CLICK SPRING	
M621	1S998-504	MEASURING MODE DIAL UNIT	
M622	1C998-046	METERING MODE DIAL UNIT	
M623	G1-14030FA	SCREW	

Ref No.	Parts No.	Description	Common
M624	1K220-548	SB LOCK LEVER SPRING	
M625	1K601-630	POWER DIAL CLICK PLATE	
M626	1K241-311	POWER DIAL SW BRUSH	
M627	1K010-501	SCREW	
M628	1C998-044	SUB C/D BASE UNIT	
M629	G1-17040FA	SCREW	
M630	1K119-213	EXPOSURE PREVENT SPONGE	
M631	G1-17025FA	SCREW	
M632	1K208-243	COMPENSATION BUTTON	
M633	1S758-088	RUBBER SW	
M634	1S998-505	C/D FPC UNIT	
M635	1K119-237	ADHESIVE DOUBLE COATED TAPE	
M636	1K119-329	TAPE	
M637	1S998-507	AE LOCK BUTTON UNIT	
M638	1C998-362	EXERNAL LCD BASE UNIT	
M639	1K241-310	POWER DIAL CLICK SPRING	
M640	G1-17060FA	SCREW	
M641	1B610-158	RELEASE SWITCH UNIT	
M642	1K119-214	SPONGE	
M643	1B060-663	AF ASSIST LAMP UNIT	
M644	1K208-248	REWIND SIDE PUSH BUTTON CAP B	
M645	1K601-647	BENT PLATE	
M646	1K208-242	EXPOSURE COMPENSATION BUTTON	

6-1-7. CAMERA BODY External (U)



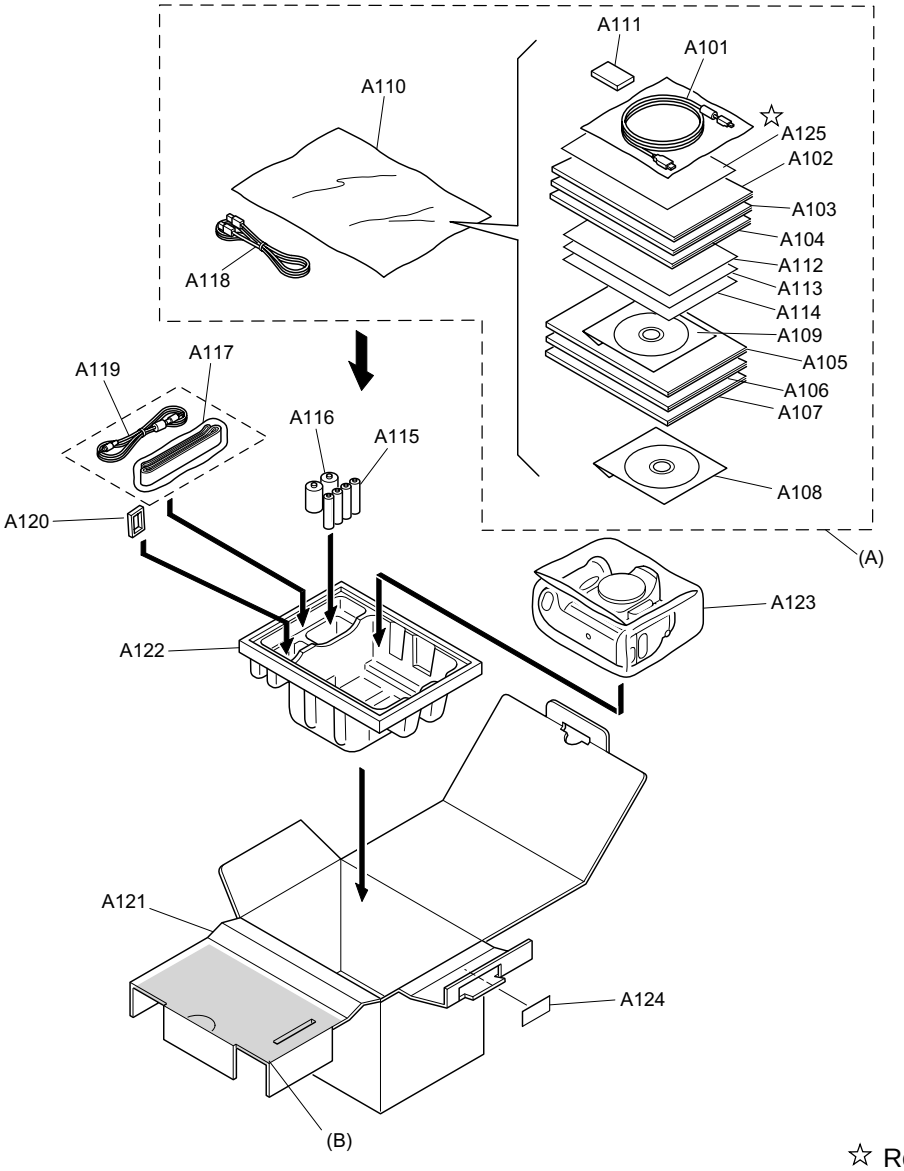
N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M701	1C998-035	EYE PIECE BARREL UNIT	
M702	H2-20045FA	SCREW	
M703	1K100-147	EYELET B REWIND SIDE	
M704	1K601-863	PLATE NUT	
M705	1K682-680	BACKDOOR OPENER CAVER	
M706	1K010-377	SCREW	
M707	1K119-715	HANES FIXED TEPE	
M708	1S045-372	DSC FPC HANESU	
M709	1G950-099	FOCUS SCREEN	
M710	1B002-275	FRONT COVER UNIT	
M711	1K010-464	SCREW	
M712	1K010-463	SCREW	
M713	1K119-201	A/M COVER PLATE	
M714	1K010-259	SCREW	
M715	1K206-170	A/M CHANGE LEVER	
M716	1K010-291-2	SCREW	
M717	1K010-292-2	SCREW	
M718	1K208-241	FLASH UP BUTTON	
M719	1K404-086	BAYONET MOUNT	
M720	1K240-468-4	BAYONET RING SPRING	
M721	1K010-259	SCREW	
M722	1C998-016	Fmin COUPLING UNIT	
M723	1C998-036	EYE PIECE BASE UNIT	

Ref No.	Parts No.	Description	Common
M724	1C998-361	TOP COVER UNIT	
M725	1K682-681	GLIP COVER	
M726	1K119-317	DROP PROOF SPONGE	
M727	1S758-085	PREVIEW BUTTON SW	
M728	1K208-240	PREVIEW BUTTON	
M729	1K119-202	ADHESIVE DOUBLE COATED TAPE	
M730	1K682-386	RED GRIP RUBBER	
M731	1K010-483	SCREW	
M732	G1-17035FD	SCREW	
M733	H1-17060FA	SCREW	
M734	1K010-462	SCREW	
M735	1K100-146	EYELET A WINDING SIDE	

6-2. E-Model

6-2-1. Packing and Accessories (E)



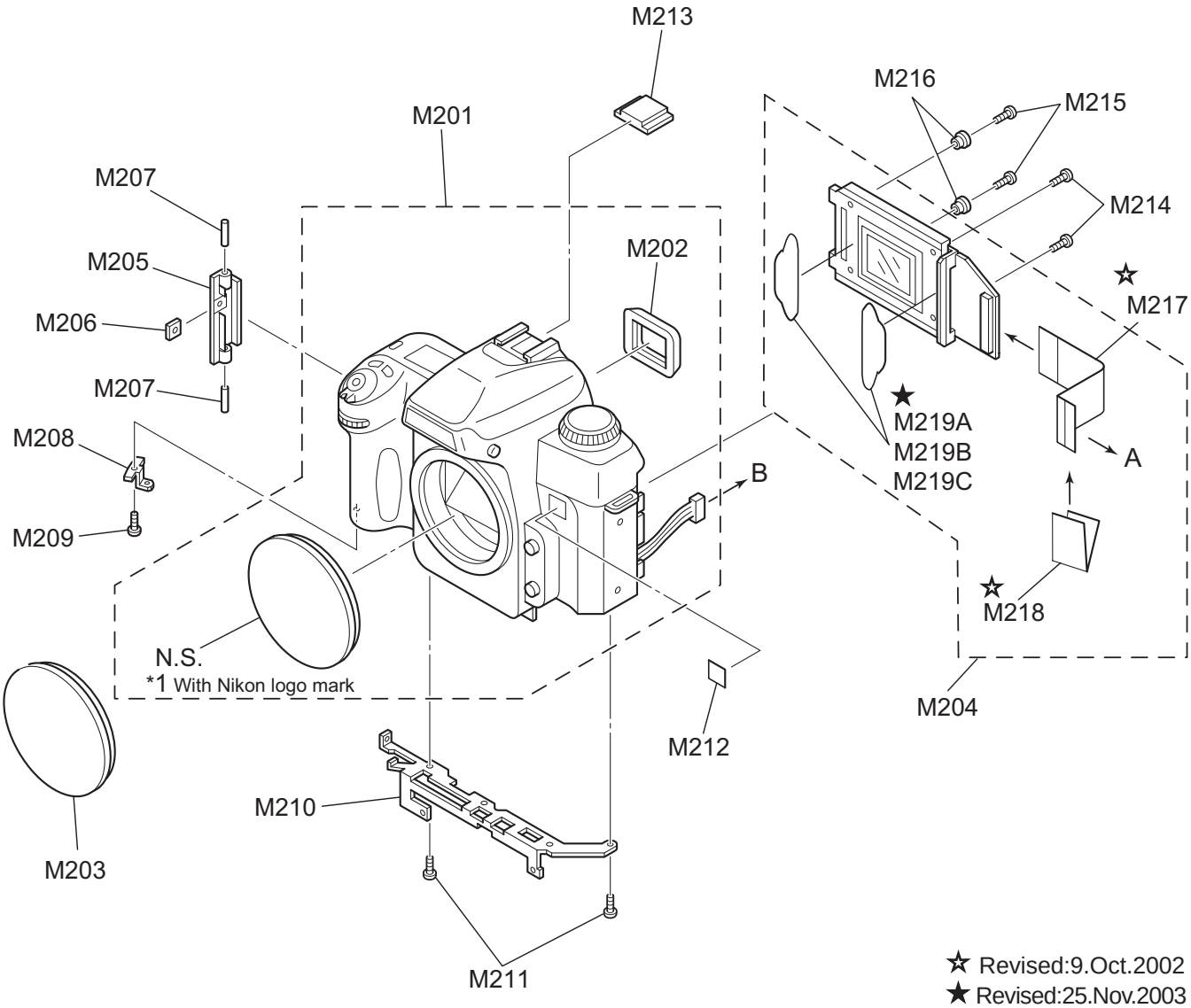
☆ Revised:14.Nov.2002

Ref No.	Parts No.	Description	Common
A101	FZ04205-100	USB CABLE	
A102	BL00140-200	OWNER'S MANUAL E	
A103	BL00140-300	OWNER'S MANUAL F	
A104	BL00140-400	OWNER'S MANUAL G	
A105	BL00155-200	I/F MANUAL E	
A106	BL00155-300	I/F MANUAL F	
A107	BL00155-400	I/F MANUAL G	
A108	FZ31400-101	EX3.1 CD-ROM	
A109	FZ31400-200	CD-ROM(PhotoShop_E)	
A110	AZF0000-111	BAG PLASTIC NO.1	☆
A111	BB13437-100	LCD CAP	
A112	BL00188-200	SOFTWEARGUIDE E	
A113	BL00188-300	SOFTWEARGUIDE F	
A114	BL00188-400	SOFTWEARGUIDE G	
A115	FZ04793-100	ALKALINE BATTERY	

Ref No.	Parts No.	Description	Common
A116	FZ04089-100	LITIUM BATTERY	(CR123A)
A117	BB11758-100	SHOULDER BELT	
A118	FZ04797-100	IEEE1394 CABLE	
A119	BF02369-100	VIDEO CABLE	
A120	FZ04809-100	EYEPIECE COVER	
A121	FZ04813-100	UNITARY BOX	
A122	FZ04767-100	SHEET MOLD	
A123	AZF0000-321	HDPE BAG NO.12	
A124	BB12943-100	BAR CODE LABEL BLANK	
A125	BL00243-100	LEAFLET	

*Store the (A) part in the dotted line on the reticulation after tucking in UNITARY BOX(B).

6-2-2.CAMERA BODY (E)



☆ Revised:9.Oct.2002
★ Revised:25.Nov.2003
N.S.:Not Supply

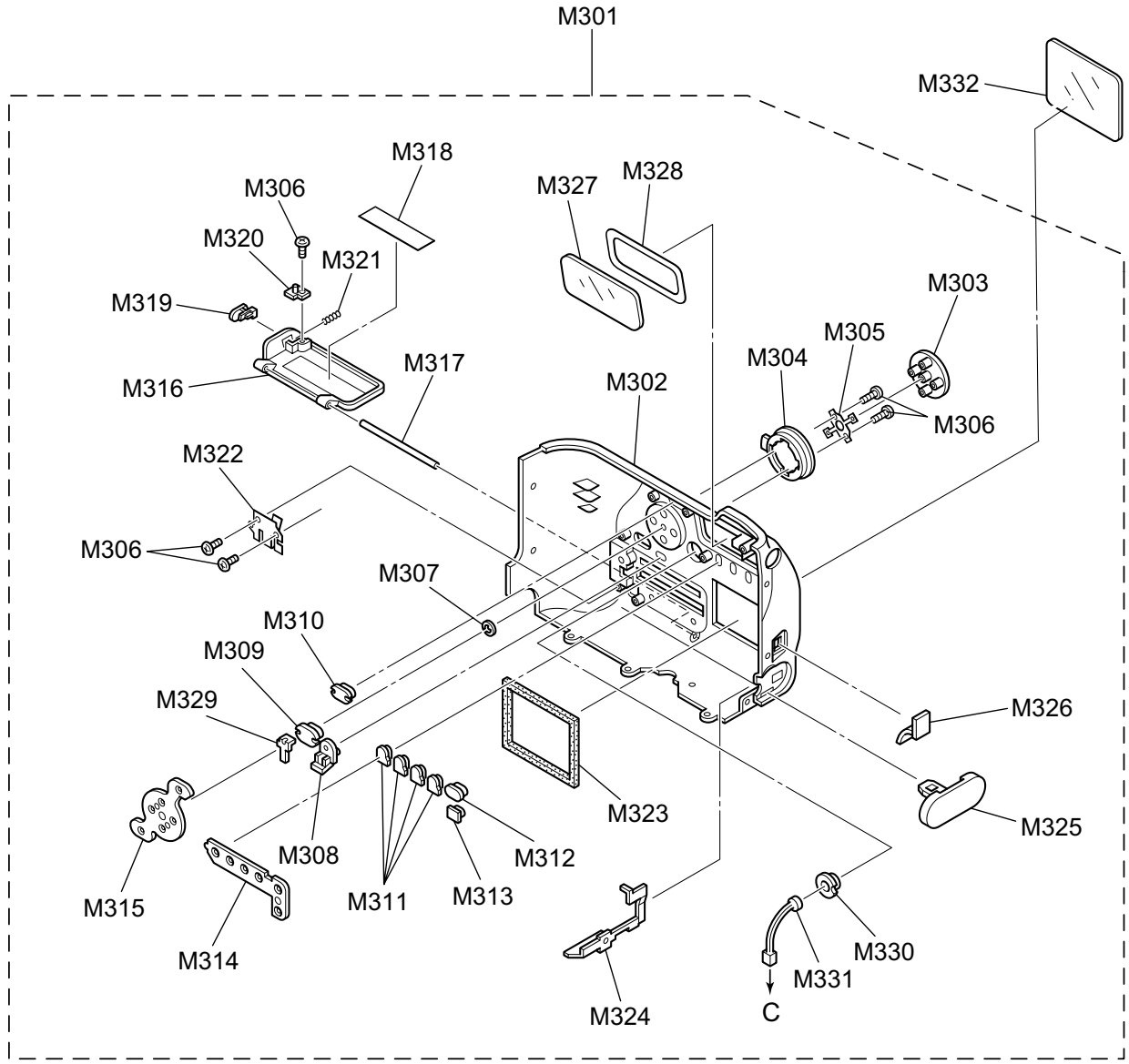
Ref No.	Parts No.	Description	Common
M201	BF04016-100	CAMERA BODY ASSY	
M202	FZ04801-100	RUBBER EYECUP	
M203	FZ04806-100	BODY CAP	
M204	BF04017-100	CCD HOLDER ASSY	
M205	BB13430-100	GRIP BASE	
M206	BB08775-100	M1.7 PLATE NUT	
M207	BB13431-100	SHAFT(GRIP)	
M208	BB13429-100	PLATE GRIP	
M209	ATG1724-0ND	SCREW BT2P17*40B	
M210	BB13428-100	PLATE BOTTOM	

Ref No.	Parts No.	Description	Common
M211	BB14857-100	SCREWM1.7X3.0BNS	
M212	BB10000-200	CCD BADGE S	
M213	FZ04876-100	SHOECAP	
M214	BB11386-100	SCREW M1.2X2.4C	
M215	BB15087-100	SCREW M1.2X5.5C	
M216	BB15088-100	SCREW SPACER	
☆ M217	FZ04775-100	FFC(CCD-MAIN)	
☆ M218	FZ04874-100	BUSTERAID	
★ M219A	BB14628-100	CCD SPACER 3	
★ M219B	BB14628-200	CCD SPACER 2	
★ M219C	BB14628-300	CCD SPACER 1	

*1 BODY CAP attached to CAMERA BODY ASSY delivered as an after parts has the logo of Nikon.Therefore, the thing not distributed to the user.

*2 Never disassemble the inside of CCD HOLDER ASSY.

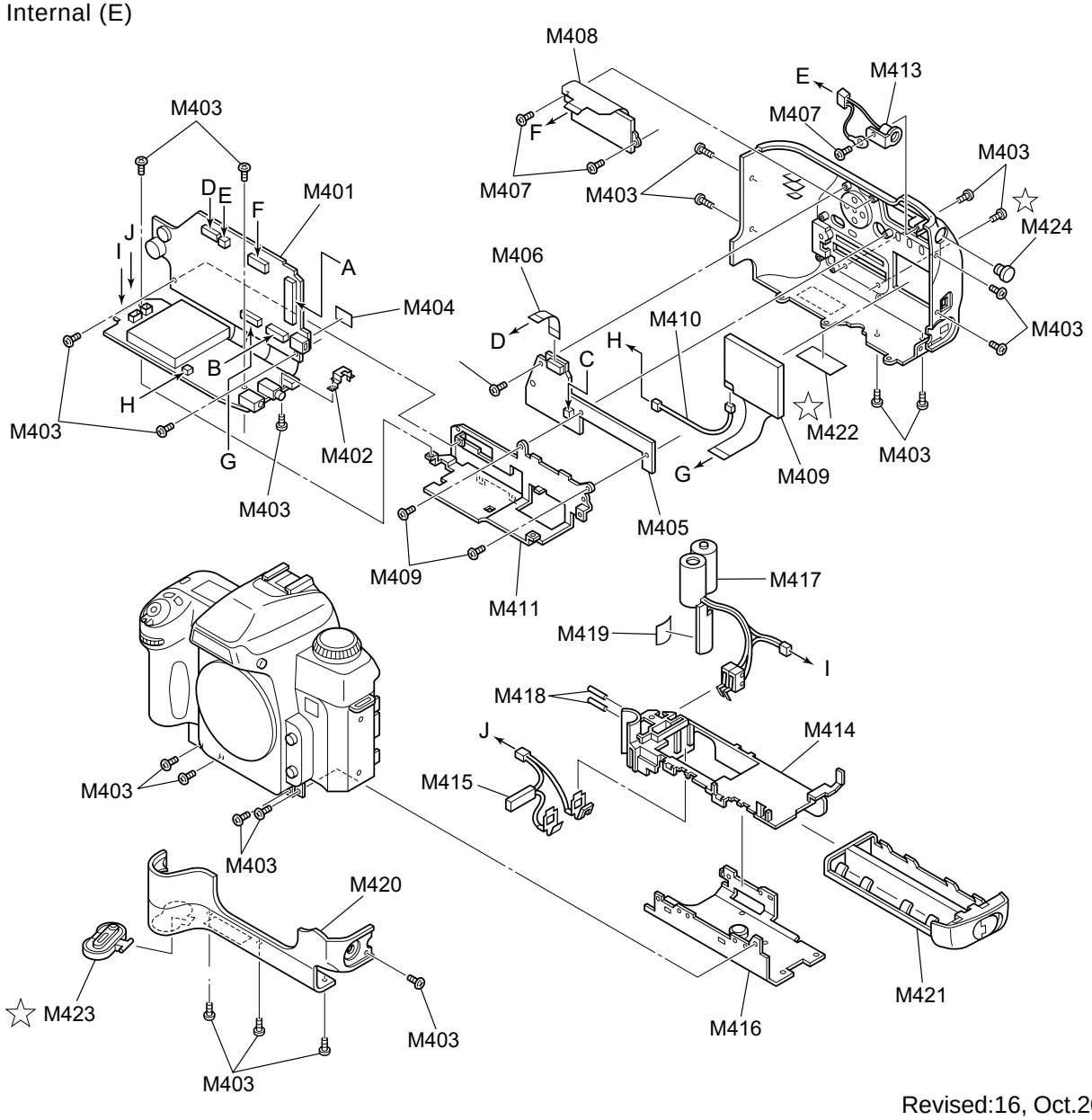
6-2-3. Cabinet R (E)



Ref No.	Parts No.	Description	Common
M301	BU01985-100	R CABI ASSY	
M302	BB13363-100	REAR CABI	
M303	BB13364-100	CURSOR BUTTON	
M304	BB13365-100	C LOCK LEVER	
M305	BB13366-100	CURSOR PSP	
M306	BB13149-100	SCREW BT2P1.7X4.0BC	
M307	ARE2010-CN1	JIS E-RING 2.0	
M308	BB13367-100	LED GUIDE	
M309	BB13368-100	OK BUTTON	
M310	BB13369-100	BACK BUTTON	
M311	BB13370-100	CHANGE BUTTON	
M312	BB13371-100	FUNC BUTTON	
M313	BB13372-100	PLAY BUTTON	
M314	BB13373-100	RUBBER KEY F	
M315	BB13374-100	RUBBER KEY C	
M316	BB13375-100	CARD COVER	
M317	BB13376-100	SHAFT(CARD)	
M318	BB13377-100	LABEL(CARD)	
M319	BB13378-100	CARD KNOB	
M320	BB13379-100	KNOB HOLDER	

Ref No.	Parts No.	Description	Common
M321	BB13380-100	CSP(CARD)	
M322	BB13381-100	CARD PSP	
M323	BB13382-100	LCD CUSHION	
M324	BB13383-100	JACK PLATE	
M325	BB13384-100	JACK COVER	
M326	BB13385-100	1394 COVER	
M327	BB10793-100	DISP WINDOW	
M328	BB11420-100	W FACE TAPE	
M329	BB14120-100	BLIND SHEET	
M330	BB13432-100	MIC GUM	
M331	FZ04771-100	MIC HARNESS ASSY	
M332	BB13433-100	MONITOR WINDOW	

6-2-4. Internal (E)



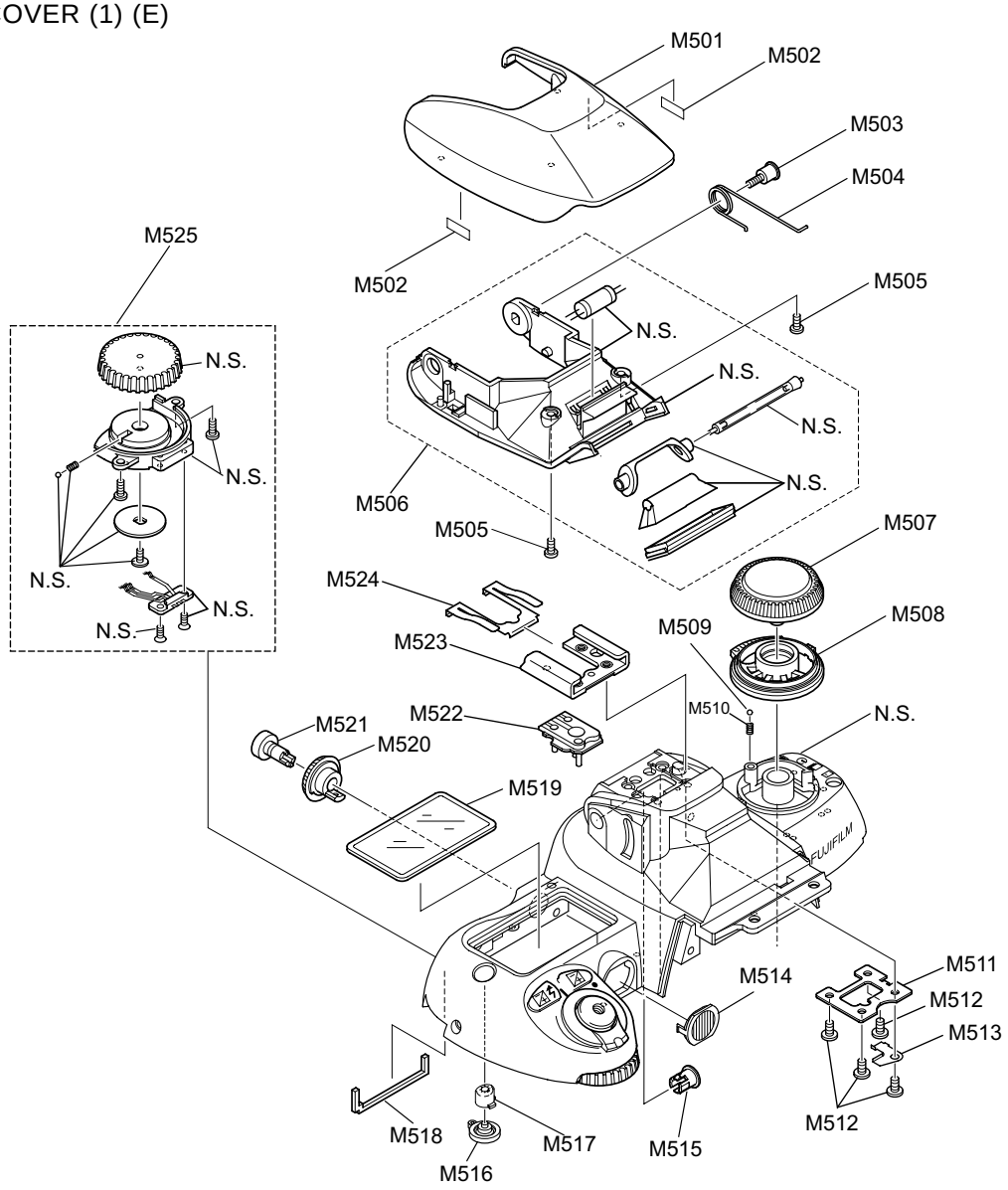
Revised:16, Oct.2002

Ref No.	Parts No.	Description	Common
M401	CB0917-B101	MAIN PWB ASSY	
M402	BB11150-100	USB PLATE	
M403	BB14857-100	SCREW M1.7X3.0BNS	
M404	FZ04875-100	BUSTERAID	
M405	CB0919-A100	SW PWB ASSY	
M406	FZ04774-100	FFC(SW-MAIN)	
M407	ATG1724-0ND	SCREW	
M408	FZ03776-100	REAR DISPLAY PANEL	
M409	BF03968-100	LCD MONITOR	
M410	FZ04772-100	LCD MONITOR HARNESS	
M411	BU02655-100	MAIN FRAME ASSY	
M412	BB14857-100	SCREW M1.7X3.0BNS	
M413	BF03999-100	SYNCHRO CONST	
M414	BB13387-100	BATT HOLDER	
M415	BU02563-100	BATT HARNESS ASSY	

Ref No.	Parts No.	Description	Common
M416	BU01989-100	BOTTOM FRAME ASSY	
M417	BU01991-100	CR SPACER ASSY	
M418	BB13390-100	SHAFT(SW)	
M419	BB13393-100	CR LABEL	
M420	BB13386-100	FRONT CABI	
M421	BU01990-100	BATT CART ASSY	
M422	BB13435-201	PRODUCT LABEL	
M423	FZ04805-100	CR BATT COVER	
M424	FZ04807-100	SYNCHRO CAP	

* Build in MAIN PWB ASSY which tries to be replaced detaching M402-M404 when you replace MAIN PWB ASSY.

6-2-5. TOP COVER (1) (E)

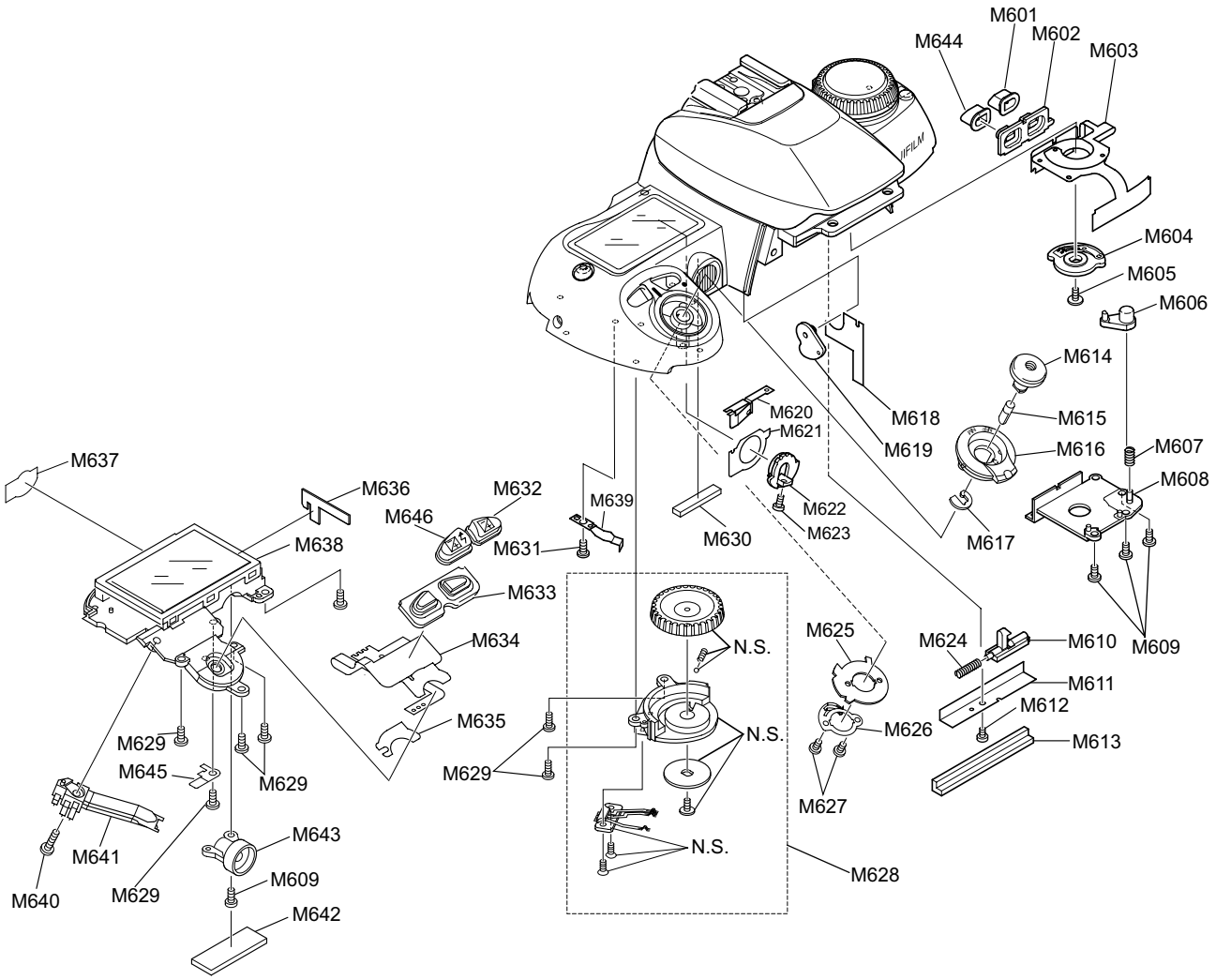


N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M501	1K682-437	SB UPPER CASE	
M502	1K119-308	RUBBER SEAL	
M503	1K010-469	SCREW	
M504	1K230-548	FLASH UP SPRING	
M505	G1-17030FD	SCREW	
M506	1B060-713	SB LOWER CASE UNIT	
M507	1C998-070	MODE DIAL UNIT	
M508	1C998-071	WINDING DIAL UNIT	
M509	1K078-011	CLICK BALL	
M510	1K220-532	MODE DIAL CLICK SPRING	
M511	1S700-355	BACKING PLATE	
M512	1K001-077	SCREW	
M513	1K611-833	LUG PLATE A	
M514	1K682-420	AF ASSIST LAMP COVER	
M515	1K631-102	SB CASE AXLE	

Ref No.	Parts No.	Description	Common
M516	1S758-089	ILLUMINATION RUBBER SW	
M517	1K208-244	ILLUMINATION ON/OFF BUTTON	
M518	1K119-318	DROP PROOF SPONGE	
M519	1C998-042	EXTERNAL LCD WINDOW UNIT	
M520	1K201-143	METERING MODE DIAL	
M521	1K208-246	AE LOCK BUTTON	
M522	1C998-040	SHOE MOLD UNIT	
M523	1K406-032-1	SHOE	
M524	1K240-867	SHOE SPRING	
M525	1C998-043	MAIN C/D BASE UNIT	

6-2-6. TOP COVER (2) (E)

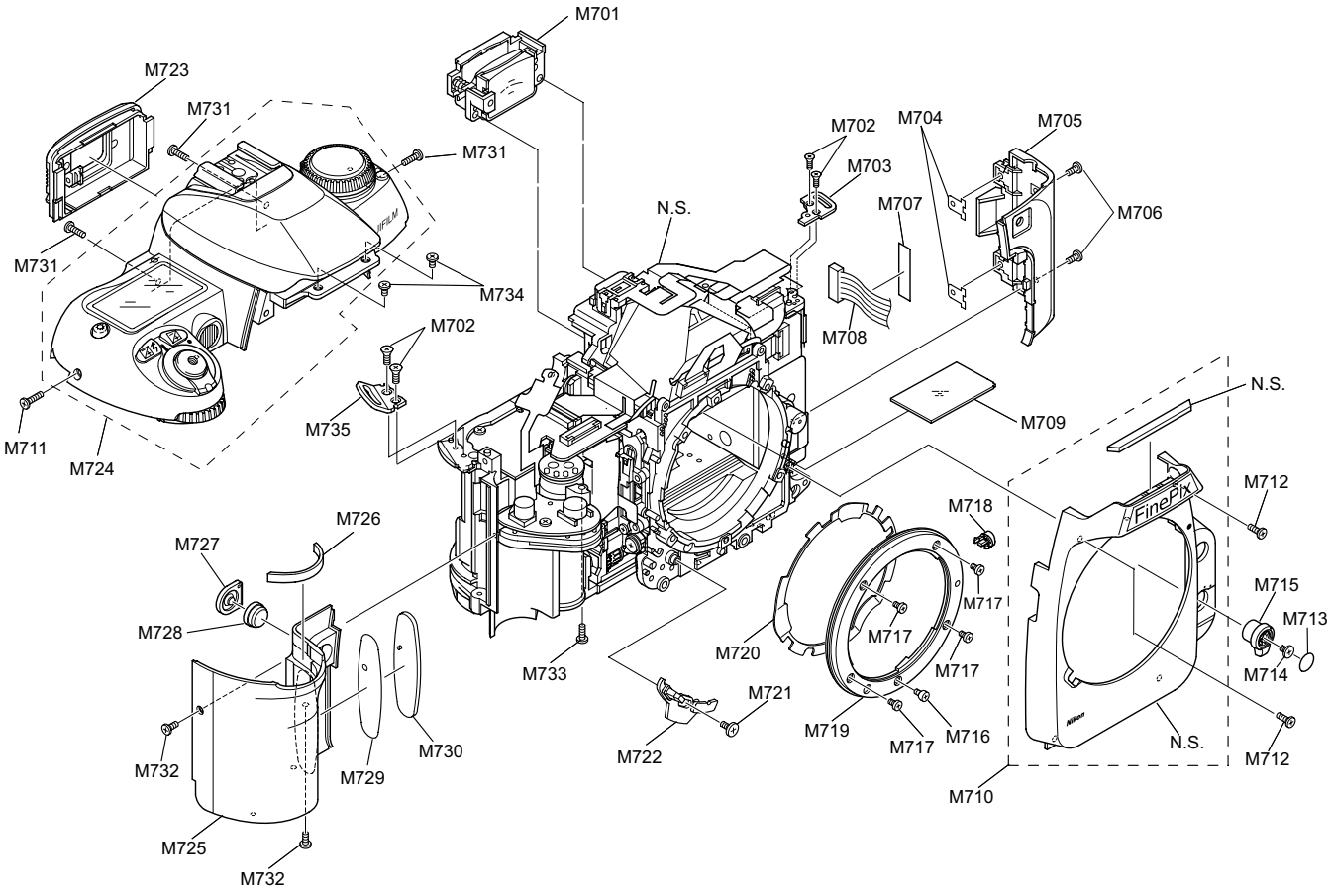


N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M601	1K208-247	REWIND SIDE PUSH BUTTON CAP A	
M602	1S758-090	RUBBER BUTTON	
M603	1S998-502	M/D FPC UNIT	
M604	1C998-048	MODE DIAL SW SPRING UNIT	
M605	1K010-146	SCREW	
M606	1K208-249	WINDING LOCK MOLD	
M607	1K220-496	SPRING	
M608	1K682-427	PLATE	
M609	G1-17030FA	SCREW	
M610	1K682-418	SB LOCK LEVER	
M611	1K612-480	SB LOCK LEVER RETAINER	
M612	G1-14025FD	SCREW	
M613	1K119-327	DROP PROOF SPONGE	
M614	1K208-245	RELEASE BUTTON	
M615	1K682-423	RELEASE BUTTON SLEEVE	
M616	1K206-171	POWER DIAL	
M617	1K060-054	E-RING	
M618	1S998-506	SB UP FPC UNIT	
M619	1C998-038	SB UP SWITCH UNIT	
M620	1K241-313	METERING MODE CLICK SPRING	
M621	1S998-504	MEASURING MODE DIAL UNIT	
M622	1C998-046	METERING MODE DIAL UNIT	
M623	G1-14030FA	SCREW	

Ref No.	Parts No.	Description	Common
M624	1K220-548	SB LOCK LEVER SPRING	
M625	1K601-630	POWER DIAL CLICK PLATE	
M626	1K241-311	POWER DIAL SW BRUSH	
M627	1K010-501	SCREW	
M628	1C998-044	SUB C/D BASE UNIT	
M629	G1-17040FA	SCREW	
M630	1K119-213	EXPOSURE PREVENT SPONGE	
M631	G1-17025FA	SCREW	
M632	1K208-243	COMPENSATION BUTTON	
M633	1S758-088	RUBBER SW	
M634	1S998-505	C/D FPC UNIT	
M635	1K119-237	ADHESIVE DOUBLE COATED TAPE	
M636	1K119-329	TAPE	
M637	1S998-507	AE LOCK BUTTON UNIT	
M638	1C998-362	EXERNAL LCD BASE UNIT	
M639	1K241-310	POWER DIAL CLICK SPRING	
M640	G1-17060FA	SCREW	
M641	1B610-158	RELEASE SWITCH UNIT	
M642	1K119-214	SPONGE	
M643	1B060-663	AF ASSIST LAMP UNIT	
M644	1K208-248	REWIND SIDE PUSH BUTTON CAP B	
M645	1K601-647	BENT PLATE	
M646	1K208-242	EXPOSURE COMPENSATION BUTTON	

6-2-7. CAMERA BODY External (E)



N.S.:Not Supply

Ref No.	Parts No.	Description	Common
M701	1C998-035	EYE PIECE BARREL UNIT	
M702	H2-20045FA	SCREW	
M703	1K100-147	EYELET B REWIND SIDE	
M704	1K601-863	PLATE NUT	
M705	1K682-680	BACKDOOR OPENER CAVER	
M706	1K010-377	SCREW	
M707	1K119-715	HANES FIXED TEPE	
M708	1S045-372	DSC FPC HANESU	
M709	1G950-099	FOCUS SCREEN	
M710	1B002-275	FRONT COVER UNIT	
M711	1K010-464	SCREW	
M712	1K010-463	SCREW	
M713	1K119-201	A/M COVER PLATE	
M714	1K010-259	SCREW	
M715	1K206-170	A/M CHANGE LEVER	
M716	1K010-291-2	SCREW	
M717	1K010-292-2	SCREW	
M718	1K208-241	FLASH UP BUTTON	
M719	1K404-086	BAYONET MOUNT	
M720	1K240-468-4	BAYONET RING SPRING	
M721	1K010-259	SCREW	
M722	1C998-016	Fmin COUPLING UNIT	
M723	1C998-036	EYE PIECE BASE UNIT	

Ref No.	Parts No.	Description	Common
M724	1C998-361	TOP COVER UNIT	
M725	1K682-681	GLIP COVER	
M726	1K119-317	DROP PROOF SPONGE	
M727	1S758-085	PREVIEW BUTTON SW	
M728	1K208-240	PREVIEW BUTTON	
M729	1K119-202	ADHESIVE DOUBLE COATED TAPE	
M730	1K682-386	RED GRIP RUBBER	
M731	1K010-483	SCREW	
M732	G1-17035FD	SCREW	
M733	H1-17060FA	SCREW	
M734	1K010-462	SCREW	
M735	1K100-146	EYELET A WINDING SIDE	

6-4. Electrical Parts (U)(E)

[NOTE]

The components indicated by mark⚠ are critical for safety. When indicated parts by reference number,please include the board name.

* Due to standardization,replacement in the parts list may be different form the parts list specified in the circuit or the components used on the set.

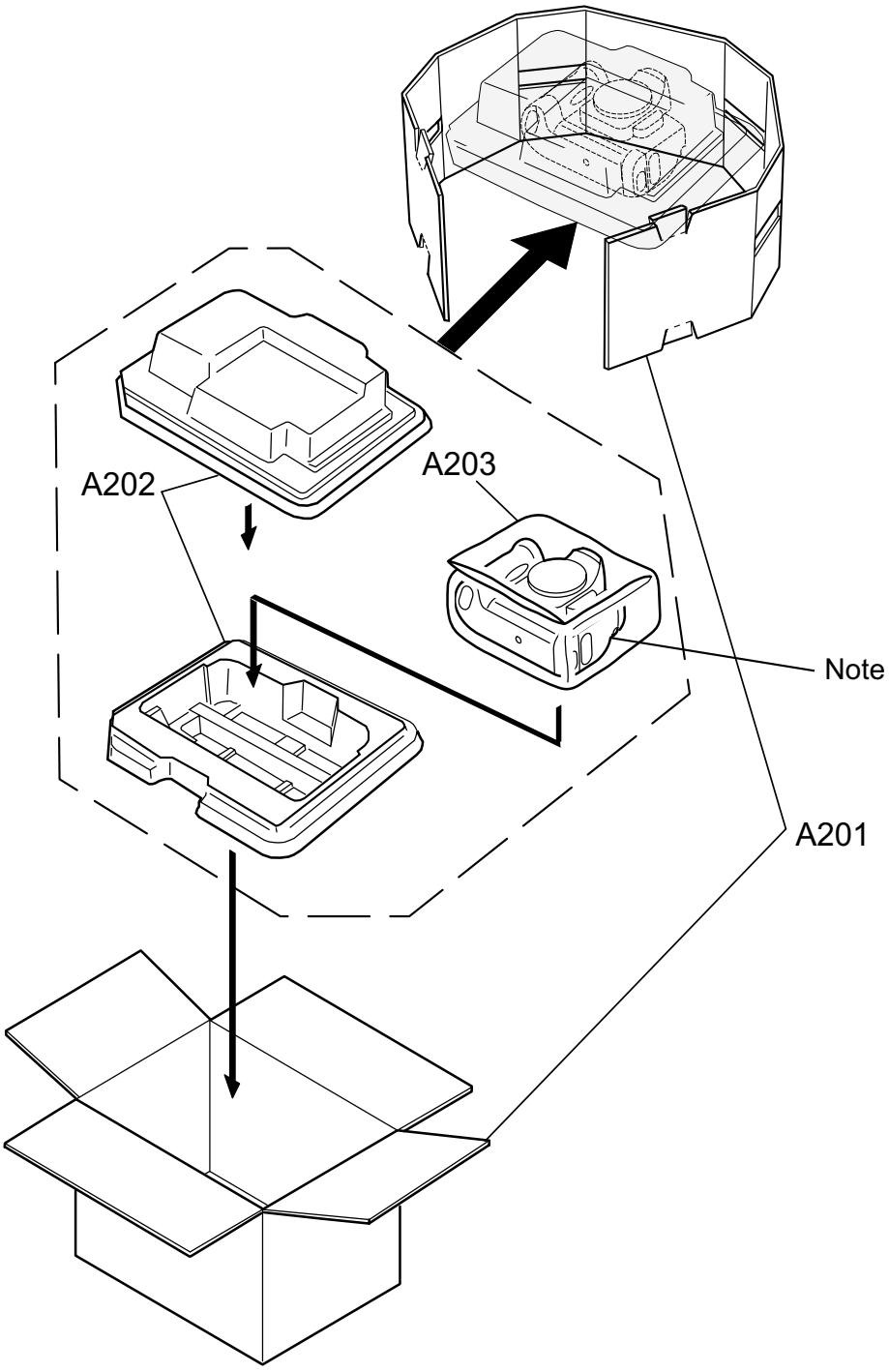
U-Model

Ref.No.	Part No.	Description	
	**********		
	CB0917-A101 MAIN PWB ASSY (U-Model)		
	**********		
		[CONNECTOR]	
J602	FGY051-0202	CONNECTOR	CJ 20P SN 0.5MM NH
		[SWITCH]	
SW700	FZ01045-100	SWITCH	
		[FUSE]	
⚠F700	FP00018-253	FUSE	2.5A 125V
⚠F701	FP00018-203	FUSE	2A 125V
⚠F702	FP00039-103	FUSE	1A 32V
⚠F703	FP00039-253	FUSE	2.5A 32V
⚠F704	FP00039-253	FUSE	2.5A 32V
⚠F705	FP00039-502	FUSE	500MA 32V
⚠F706	FP00039-203	FUSE	2A 32V
⚠F707	FP00039-103	FUSE	1A 32V
⚠F708	FP00039-103	FUSE	1A 32V
		[CONNECTOR]	
CN200	FGB056-0241	CONNECTOR	CJ 24P FN 0.5MM NH
CN300	FGA117-0091	CONNECTOR	CJ 9P SN 1.25MM RV
CN301	FGB056-0171	CONNECTOR	CJ 17P FN 0.5MM NH
CN302	FGB068-0201	CONNECTOR	CJ 20P FN 0.5MM NH
CN303	FGA096-0031	CONNECTOR	CJ 3P RN 1.0MM PH
CN500	FGB041-0381	CONNECTOR	CJ 38P FN 0.5MM NH
CN700	FGA042-0022	CONNECTOR	LJ 2P SN 2MM PN
CN701	FGA042-0032	CONNECTOR	LJ 3P SN 2MM PN
CN702	FGA155-0021	CONNECTOR	CJ 2P SN 0.8MM RH
CN800	FGY047-0261	CONNECTOR	CJ 26P B 1.1MM NH
CN800	FZ04802-100	CF EJECTOR	
		[BATTERY]	
BT300	FZ04699-100	BATTERY	
		[BUZZER]	
BZ300	FZ03230-100	BUZZER	
		[JACK]	
CN304	FZ03803-100	JACK	USB
J700	FZ02412-100	JACK	
J701	FZ04373-100	JACK	
CN801	FZ04925-100	JACK	CF
CN1001	FZ04363-100	JACK	IEEE1394
	**********		
	CB0919-A100 SW PWB ASSY		
	**********		
		[CONNECTOR]	
CN900	FGA096-0021	CONNECTOR	CJ 2P RN 1.0MM PH
CN901	FGB088-0171	CONNECTOR	CJ 17P FN 0.5MM NH

E-Model

Ref.No.	Part No.	Description	
	**********		
	CB0917-B101 MAIN PWB ASSY (E-Model)		
	**********		
		[CONNECTOR]	
J602	FGY051-0202	CONNECTOR	CJ 20P SN 0.5MM NH
		[SWITCH]	
SW700	FZ01045-100	SWITCH	
		[FUSE]	
⚠ F700	FP00018-253	FUSE	2.5A 125V
⚠ F701	FP00018-203	FUSE	2A 125V
⚠ F702	FP00039-103	FUSE	1A 32V
⚠ F703	FP00039-253	FUSE	2.5A 32V
⚠ F704	FP00039-253	FUSE	2.5A 32V
⚠ F705	FP00039-502	FUSE	500MA 32V
⚠ F706	FP00039-203	FUSE	2A 32V
⚠ F707	FP00039-103	FUSE	1A 32V
⚠ F708	FP00039-103	FUSE	1A 32V
		[CONNECTOR]	
CN200	FGB056-0241	CONNECTOR	CJ 24P FN 0.5MM NH
CN300	FGA117-0091	CONNECTOR	CJ 9P SN 1.25MM RV
CN301	FGB056-0171	CONNECTOR	CJ 17P FN 0.5MM NH
CN302	FGB068-0201	CONNECTOR	CJ 20P FN 0.5MM NH
CN303	FGA096-0031	CONNECTOR	CJ 3P RN 1.0MM PH
CN500	FGB041-0381	CONNECTOR	CJ 38P FN 0.5MM NH
CN700	FGA042-0022	CONNECTOR	LJ 2P SN 2MM PN
CN701	FGA042-0032	CONNECTOR	LJ 3P SN 2MM PN
CN702	FGA155-0021	CONNECTOR	CJ 2P SN 0.8MM RH
CN800	FGY047-0261	CONNECTOR	CJ 26P B 1.1MM NH
CN800	FZ04802-100	CF EJECTOR	
		[BATTERY]	
BT300	FZ04699-100	BATTERY	
		[BUZZER]	
BZ300	FZ03230-100	BUZZER	
		[JACK]	
CN304	FZ03803-100	JACK	USB
J700	FZ02412-100	JACK	
J701	FZ04373-100	JACK	
CN801	FZ04925-100	JACK	CF
CN1001	FZ04363-100	JACK	IEEE1394
	**********		
	CB0919-A100 SW PWB ASSY		
	**********		
		[CONNECTOR]	
CN900	FGA096-0021	CONNECTOR	CJ 2P RN 1.0MM PH
CN901	FGB088-0171	CONNECTOR	CJ 17P FN 0.5MM NH

6-5.Transportation box of camera body repair.



(Note) Pack the form of "CAMERA BODY ASSY (In dotted line of M201)" on page 71 and page 78.

Revised:24.Mar.2003

Ref.No.	Parts No.	Description	Remarks
A201	ZPK0100-100	Packing box for S2Pro CAMERA BODY	With inside frame
A202	ZPK0101-100	Protector for S2Pro CAMERA BODY	One pair in the top and bottom.
A203	NAY0083	Bag for transportation	S1Pro and commonness

7. Appendix

7-1.List of Related Technical Updates Issued

To ensure that after-sales srevice is performed accuratety, keep a record here of the technical updates issued that cover this device.

Technical Update No.	Date	Title	Details/Other

FUJI PHOTO FILM CO., LTD.
26-30, Nishiazabu 2-chome, Minato-ku, Tokyo 106-8620, Japan.